

Georgia Southern University McNair Scholars Journal

Volume 6

Article 1

2005

McNair Research Journal

Follow this and additional works at: <https://digitalcommons.georgiasouthern.edu/mcnair-journal>



Part of the [Physical Sciences and Mathematics Commons](#)

Recommended Citation

(2005) "McNair Research Journal," *Georgia Southern University McNair Scholars Journal*. Vol. 6, Article 1.
Available at: <https://digitalcommons.georgiasouthern.edu/mcnair-journal/vol6/iss1/1>

This full issue is brought to you for free and open access by the Journals at Digital Commons@Georgia Southern. It has been accepted for inclusion in Georgia Southern University McNair Scholars Journal by an authorized administrator of Digital Commons@Georgia Southern. For more information, please contact digitalcommons@georgiasouthern.edu.



GEORGIA SOUTHERN
UNIVERSITY

TRiO

RONALD E. McNAIR
POST-BACCALAUREATE
ACHIEVEMENT PROGRAM

Scholarly Journal
Summer 2005
Volume 6



Division of Student Affairs and Enrollment Management
Educational Opportunity Programs
POST OFFICE BOX 8071
STATESBORO, GA 30460-8071
PHONE (912) 681-5458/ FAX (912) 681-0863

May 4, 2006

The Georgia Southern University Ronald E. McNair Post-Baccalaureate Achievement Program is pleased to present its sixth issue of the *McNair Research Journal*. This journal is a compilation of articles produced by the 2005 cohort of McNair Scholars during the Sixth Annual Summer Research Institute held May 16-July 10, 2005. This scholarly work was completed with the assistance of a group of highly capable faculty mentors from Georgia Southern University. This *Journal* is designed to provide future doctoral students with a forum to publish their work. We are extremely proud of all of the McNair Scholars for their academic acumen and their thirst for learning.

The McNair staff and scholars are indebted to the numerous individuals who shared in shaping the direction of the program since its inception at Georgia Southern University in 1998. First, thanks to Mrs. Mary Woods, Assistant Director of the McNair Program for her leadership and nurturing spirit. Secondly, thanks to Dr. Teresa Thompson, Vice President for Student Affairs and Enrollment Management, for her support and encouragement. Thanks to Dr. Cordelia Douzenis-Zinskie, Associate Professor, Curriculum, Foundations and Research, Ms. Mildred Pate, Associate Professor, Writing and Linguistics, and Dr. Sonya Shepherd, Librarian Assistant Professor for their editorial support, to the faculty mentors and the McNair Advisory Council members for their dedication and support over the past year. Also, special thanks to Dr. Charles Hardy, Founding Dean of the Jiann-Ping Hsu College of Public Health and Dr. John Diebolt, Associate Dean of Graduate Studies for their efforts. Finally, a special thanks to the Educational Opportunity Programs staff for their support and encouragement during this past year.

You are invited to comment or make suggestions that may help to improve future issues of the *McNair Research Journal*. Direct any inquires to me at (912) 681-5458 or via email sfoster@georgiasouthern.edu.
This document is funded by U.S. Department of Education Grant No. P217A030098.

Sincerely yours,

A handwritten signature in cursive script that reads "Sue Hawks-Foster".

Ms. Sue Hawks-Foster
Director, Educational Opportunity Programs

2005 McNair Scholars



Kirsten Barnard



Angel Beal



David Bostick



Korey Castleberry



Alvie Coes III



Calvin Colquitt



Shri Davis



Funmi Dosunmu



Synovia Edwards



Kimberly Jackson



Brandie Ellison



Holly Larsen

2005 McNair Scholars



Phillip Lee



Trianna McCall



Ashley Scruggs



Kelsey Thornton



Ny Thi Tran



Marsha Thomas



*Victoria
Westmoreland*



Ebony Whitfield

Editor

Mrs. Mary Woods

Photography

Ms. Susanne Oliver

Editorial Board

Dr. John Diebolt

Mrs. Mildred Pate

Dr. Sonya Shepherd

Mrs. Mary Woods

Dr. Cordelia Douzenis-Zinskie

McNair Staff

Mrs. Sue Hawks-Foster, Director

Mrs. Mary Woods, Assistant Director

Mrs. Marilyn Steel, Administrative Assistant

Mrs. Peggy Morgan, Senior Secretary

Advisory Council

Dr. Dorothy Battle

Dr. John Diebolt

Mrs. Sue Hawks-Foster

Dr. Godfrey Gibbison

Dr. Saba Jallow

Dr. Steve Vives

Dr. Cordelia Douzenis-Zinskie

Mentors

Dr. Erik Brooks

Dr. Tim Cairney

Dr. Pamela Bourland-Davis

Dr. Jennie Dilworth

Dr. Suellyn Duffey

Dr. Olivia Edenfield

Dr. Christine Ivie-Edge

Dr. Godfrey Gibbison

Dr. Amy Hackney

Dr. Francys Johnson

Dr. Barry Joyner

Dr. Janice Kennedy

Dr. Michele McGibony

Mr. Mark Mohr

Dr. Michael Nielsen

Dr. Jim Randall

Dr. Laura Regassa

Dr. Sonya Shepherd

Dr. William Smith

Dr. Darin Van Tassell

Dr. Pidi Zhang

Dr. Drew Zwald



Who is Ronald Ervin McNair?

Ronald E. McNair, the second African American to fly in space, was born on October 12, 1950 in Lake City, South Carolina. He attended North Carolina A&T State University where he graduated *Magna Cum Laude* with a B.S. degree in physics in 1971. McNair then enrolled in the prestigious Massachusetts Institute of Technology. In 1976, at the age of 26, he earned his Ph.D. in physics. McNair soon became a recognized expert in laser physics while working as a staff physicist with Hughes Research Laboratory. He was selected by NASA for the space shuttle program in 1978 and was mission specialist aboard the 1984 flight of the *USS Challenger* space shuttle.

After his death in the *USS Challenger* space shuttle accident in January 1986, members of Congress provided funding for the Ronald E. McNair Post-Baccalaureate Achievement Program. The goal is to encourage low-income, first generation students, as well as students who are traditionally under-represented in graduate schools, to expand their opportunities by pursuing doctoral studies.

Ronald E. McNair Post-Baccalaureate Achievement Program

Services

- Research opportunities for participants who have completed their sophomore year of college
- Mentoring
- Seminars and other scholarly activities designed to prepare students for doctoral studies
- Summer internships
- Tutoring
- Academic counseling
- Assistance in obtaining student financial aid
- Assistance in securing admission and financial aid for enrollment in graduate programs

Contact

For further information, visit the McNair Program in room 1026 of the Williams Center

- Call: (912) 486-7447
- Address: P.O. Box 8071 or
- E-Mail: mwoods@georgiasouthern.edu

The McNair Scholars Journal

Volume 6

Summer 2005

Table of Contents

The Acceptability of Aggressive Behaviors in Dating Relationships	1
A Response to my Bank Teller: How Has a Nation of Immigrants Become so Anti-Immigrant?	33
Glucose Fermentation Profiles of Geographically Diverse Spiroplasma Bacteria	44
An Analysis of the Relationship between High Discretionary Quarterly Revenue Accruals and Fraudulent Earnings Management Enforcement Actions taken by the SEC	54
How Has Industry changed the Business, Education, Healthcare Industries	71
The Indirect Effect of Educational Attainment, Occupation and Employment Status of Black White Income Differences	82
Gender Differences in Romantic Jealousy among College Students	100
The Variable Effectiveness of Television Commercial Approaches on Gender and Ethnic Segments of 18-25 Year Old Demographic Audiences	117
An Examination of Attitudes toward Suicide	133
Comparison of Individuals Portrayed in Print Advertisements in People Magazine as Compared to how they are portrayed in Teen People Magazine	146
Pacing Integration at Georgia Southern College	169
The Economic Impact of Splash <i>In-the-Boro</i> Water Park on Bulloch County Georgia	180
The Limited Enrollment of Minority Students at Charter Conservatory for Liberal Arts And Technology	195
Biological Investigations of Newly Synthesized Dragmacidins	208
Race, Religion, and Sex: An Analysis of Hate Crimes and Social Groups	216
The Relationship between Body Mass and Self Esteem	229
The Relationship between Body Mass and Fast Food Consumption	235
The Relationship between Attachment Styles, Self-esteem, and Loneliness	246
A Content Analysis of Conversational Interruptions on <u>The Apprentice</u> as Influenced by Gender and Status	265
Gender Disparity in Criminal Sentencing: Chivalry at Work in Georgia?	273

THE ACCEPTIBILITY OF AGGRESSIVE BEHAVIORS IN DATING RELATIONSHIPS

Kirsten Barnard, McNair Scholar

Dr. Janice Kennedy, Research Mentor
Department of Psychology

Abstract

This study examined the acceptability of relational, verbal, and physical aggression in dating relationships. Data were collected from students enrolled in an Introduction to Psychology class. Two different assessments, the CES-D Scale for depression and the Coopersmith Self-Esteem Inventory, were used in addition to experimenter-created vignettes and questionnaires. There were two versions of the vignettes (male and female aggressor), and each portrayed three different types of aggression. All five of the hypotheses were supported by the findings of the study. Physical aggression was least accepted of the three types of aggression. Female aggressors were more accepted than male aggressors in all three types of aggression. Each gender was more accepting of their same gender's relational, verbal, and physical aggressions. Participants with lower self-esteem and those who had higher depression were more accepting of aggressive behaviors in dating relationships.

The Acceptability of Aggressive Behaviors in Dating Relationships

Aggression seems to have become an integral part of our society in many ways. The environment that our society has set up includes aggression in almost every aspect of one's life. Sports such as football, soccer, and basketball include aggression in the game and surrounding the sport, which is praised and encouraged by players and spectators. There are instances of both verbal and physical aggression that can be found in sports. Aggression is also found in our defense military. Foy and Card (1987) reported that young men and women are expected to be aggressive, even violent, and to protect our country, but once back to normal lives many have difficulty adjusting. In training, young soldiers are verbally abused, and then they are taught to be violent, but many never learn that there is something wrong with treating people aggressively in a personal relationship (Foy & Card, 1987). Individuals must learn when aggressive behavior is acceptable and when it is harmful.

Personal relationships are supposed to be comforting and nurturing; however, in many instances substantial verbal and physical assaults may become a part of the relationship. Prior research on aggression in relationships has suggested multiple factors as contributing to domestic violence, such as characteristics of the aggressor, characteristics of the target of aggression, and environmental factors present in the relationship. The present study focused on potential reasons that individuals might remain in relationships in which they were targets for aggression.

Barnard: The Acceptability of Aggressive Behaviors

Repeated exposure can lessen a person's sensitivity and allow for an unacceptable situation to be looked upon as acceptable (Jezi, Molidor, & Wright, 1996; Katz & Arias, 1999).

In dating relationships, 35-96% of couples experience some type of aggression, whether relational, verbal, or physical (Brodbelt, 1978; Callahan, Tolman, & Saunders, 2003; O'Leary & Slep, 2003; Watson, Cascardi, Avery-Leaf, & O'Leary, 2001). Relational aggression can be described as indirect behavior or words that are meant to hurt, threaten, or damage a person, such as gossip. Another type of aggression, verbal, can be explained as words that are directed at the target that are meant to hurt and express one's aggression, such as calling a person a "dork." The last type of aggression is physical. Physical aggression is a behavior that is meant to harm and is directed physically towards the target, such as hitting or shoving the person.

There is not a consensus among researchers in the field as to which type of aggression is more harmful to a person. Many researchers do not count verbal aggression in the definition of dating violence, but there are others who do (Lewis & Fremouw, 2001). In order to compare findings across studies, it is important for researchers to come to an agreement on what constitutes dating violence. A study by Archer and Haigh (1999) found that verbal aggression is more accepted than physical violence, especially by women. Verbal aggression is less threatening in nature than physical aggression; however, it can still be damaging to a person.

Aggression in dating relationships is common. In one study, approximately 40% of female participants who were in dating relationships reported experiencing some type of dating violence (Burcky, Reuteran, & Kopsky, 1988, as cited in Cauffman, Feldman, Jensen, & Arnett, 2000). The incidence may actually be higher. Self-report is the most common data collection techniques used in the field of dating and domestic violence. Although the studies are confidential, many participants may neglect to report the truth because of the social desirability factor (Jenkins & Aube, 2002; Lewis & Fremouw, 2001). Therefore, the likelihood that violence in relationships is being underreported should be taken into account when judging the magnitude of cases of dating violence.

Gender differences in reports of acceptability of aggression in relationships have been found. Cauffman, Feldman, Jensen, and Arnett (2000) found that dating violence was more acceptable for female participants than for male participants. This finding demonstrates how gender can have a dramatic effect on one's perception. It was also found that dating violence was more acceptable with female aggressors than with male aggressors in the same situation (Cauffman, et al., 2000).

It is commonly believed that men can hurt women more so than women can hurt men physically due to the generally larger structure and amount of muscles men have. In a few studies (e.g., Linder, Crick, and Collins, 2002; O'Leary & Slep, 2003), however, men reported higher levels of victimization than women. This study is contradictory to many other studies, but it aids in demonstrating the need for further research.

The results of studies demonstrating whether men or women are more likely to remain in an abusive relationship are mixed. Some (e.g., Jezi, Molidor, & Wright, 1996; Katz & Arias, 1999) have found that women stay in abusive relationships more than men do and women are the victims more often than men. Others (e.g., Jenkins & Aube, 2002; Riggs & O'Leary, 1996) have found no difference for gender in remaining in the relationship or in aggressive behavior type. However, other studies have found significant differences in the studies on dating violence, such as men being victimized more often than women and women being more acceptable as the aggressor in a relationship (Cauffman, et al., 2000; Katz & Arias, 1999; Watson, Cascardi,

Avery-Leaf, O'Leary, 2001). Further research in the area of aggression is needed because the research that has been conducted thus far has been inconsistent.

Self-esteem also plays a role in the acceptability of aggressive behaviors in relationships. In a study performed by D'Zurilla, Chang, and Sanna (2003), it was found that low self-esteem was associated with problem-solving avoidance, such as remaining in an abusive relationship. Level of self-esteem has been found to be negatively correlated with frequency and severity of relationship violence (Cascardi & O'Leary, 1992, as cited in Lewis & Fremouw, 2001). Self-esteem has also been found to be negatively correlated with level of psychological abuse in a relationship (Jezl, Molidor, & Wright, 1996). Therefore, self-esteem is very much an integral part of a person's ability to deal with abuse.

Depression is another important factor in one's view of acceptability of aggressive behaviors in dating relationships. Depression is often positively correlated with low self-esteem and self-worth (Katz & Arias, 1999). Aggressive behaviors such as relational, verbal, and physical abuse all may have an effect on the victim in some way, whether psychologically, emotionally, or physically. When a person's coping styles are not effective, many victims of dating violence become depressed (Lewis & Fremouw, (2001). Because depression aids in the lowering of one's self-worth, the victim becomes more tolerant of the abuse and less likely to leave the relationship (Katz & Arias, 1999). Taking depression and self-esteem into consideration is very important when analyzing aggressive behaviors in dating relationships.

The present study examined five hypotheses:

Hypothesis I: Relational and verbal aggression was hypothesized to be more acceptable than physical aggression. As reported in the study conducted by Archer and Haigh (1999), verbal aggression was found to be more acceptable than physical aggression. Acceptability of relational aggression has not been studied in dating relationships. However, relational aggression is similar to verbal aggression; therefore, it is reasonable to assume that it will be as acceptable as verbal aggression. The most commonly discussed type of aggression is physical aggression. Kuffel and Katz (2002) reported that 35% of participants in their study were victims of physical aggression. Physical aggression is more visible than the other types of aggression because the effects are more likely to be seen and it seems to be more traumatic and serious. Since physical aggression is looked upon as more severe than verbal and relational aggression, it is hypothesized that it will be least accepted.

Hypothesis II: Self-esteem was hypothesized to be related to the acceptance of aggression. People with lower self-esteem were expected to be more accepting of aggression. Low self-esteem has been found to be related to anger and hostility, which leads to difficulty in problem solving, especially in aggressive relationships (D'Zurilla, Chang, & Sanna, 2003). In other studies of individuals involved in abusive relationships, abuse and aggressive behaviors experienced were associated with low self-esteem and the victim remaining in the relationship (Jezl, Molidor, & Wright, 1996).

Hypothesis III: Depression was hypothesized to be related to the acceptance of aggression. Those with depression were expected to be more accepting of aggression. Depression has been found to be associated with lower self-confidence and self-worth and to contribute to negative feelings experienced due to abuse in a relationship (Lewis & Fremouw, 2001). The negative perception of oneself is associated with thoughts that remaining in a relationship with aggressive behaviors is the appropriate action to take. Therefore, it was hypothesized that depression would decrease the resistance to aggressive behaviors in a

Barnard: The Acceptability of Aggressive Behaviors

relationship and increase the probability of believing that one should remain in the abusive situation.

Hypothesis IV: Abusive behavior by female aggressors was expected to be more acceptable than that of male aggressors in dating relationships. Women are generally smaller in size than men and are therefore considered to be less capable of being the aggressor and to cause great harm to a man. Moreover, aggression by a woman is more often thought of as self-defense against a man (Cauffman, et al., 2000).

Hypothesis V: It was expected that each gender would be more accepting of the same gender's aggressions. Archer and Haigh (1999) found that sex differences do exist when analyzing the views about aggression. Each gender has different experiences and collective thoughts that are influenced by society. It is important to take gender into consideration because it affects a person's perceptions about aggression.

Method

Participants

The sample used in the experiment was 17 (25%) men and 51 (75%) women totaling 68 students from Georgia Southern University, who were currently enrolled in Introduction to Psychology in the summer 2005. The age of the students ranged from 18-33, with the mean age being 20.6 ($SD = 2.149$). The race of the participants was 61.8% Caucasian, 33.8% African-American, and 4.4% other. The classifications of the participants were as follows: 14.7% freshman, 29.4% sophomore, 36.8% junior, 16.2% senior, and 1.5% graduate. The mean GPA of the participants was 2.9 ($SD = .593$), with a minimum of 1.7 and maximum of 4.0. The participants had the option of receiving a small amount of extra credit for participating in the study. The assignment of the conditions to the participants was random with 50% receiving the female aggressor and 50% receiving the male aggressor vignettes.

Materials

Several scales were completed in the study:

The Center for Epidemiologic Studies Depression Scale (CES-D). This test is designed to measure the symptoms of depression in the general population. Questions ask how often the respondent has felt a certain way over the past week. The responses are measured on a Likert-type scale ranging from one to four, with one representing rarely or none of the time and four representing most or all of the time. The scores on the test range from 0-100. The CES-D correlates .81 with the Beck Depression Inventory (1967; Weissman, Prusoff, & Newberry, 1975, as cited in Shaver & Brennan, 1991).

Coopersmith Self-esteem Inventory (CSEI). The Self-esteem Inventory is designed to measure attitudes toward the self in various areas of experience (Coopersmith 1987). The responses on the inventory are either "like me," or "unlike me." There are 25 questions and the scores range from 0-100 on the test. Coopersmith (1987) reported adequate reliability and construct, concurrent, and predictable validity of the instrument.

Vignettes. There were two different versions of the vignettes. One version portrayed a male aggressor, and the other portrayed a female aggressor. Each question had two parts: a close-ended response on a Likert-type scale and an open-ended response. The close-ended response had a Likert-type scale ranging from one to six. The one represented "very justified" and the six represented "not justified at all." The vignettes included scenarios with a heterosexual couple in which there was an altercation or disagreement. The first vignette described the aggressor

“giving the silent treatment” to the partner, which represented the relational aggression. In the second vignette verbal aggression was portrayed; the aggressor called the partner a “jerk.” Physical aggression was demonstrated in the third vignette which described an aggressor “shoving” the other person.

The information gathered for demographics included: age, race, gender, classification, and GPA.

Design

The design of the study was a 2 (gender of aggressor) x 2 (high/low depression) x 2 (high/low self-esteem) x 2 (gender of participant) mixed-factorial design. Self-esteem was rated using the Coopersmith Self-Esteem Inventory (CSEI). The higher the CSEI scores reflected a higher self-esteem of that person. The second independent variable was depression, which was rated using the Center for Epidemiologic Studies Depression Scale (CES-D). The higher the score on the CES-D reflected a higher depression. The third independent variable was gender, which was a subject variable. Gender of aggressor in the vignette was the final independent variable. The dependent variables were acceptability of relational aggression, verbal aggression, and physical aggression. The scores for the dependent variables ranged from one to six on each question, with one representing “very justified” and the six representing “not justified at all.”

Procedure

After all participants were seated, the experimenter passed out the Informed Consent form (see Appendix A). Once the forms were completed, they were collected. The participants were then informed that they would turn the completed forms face down and the forms would then be collected by the experimenter. The completion of the questionnaires took no more than 30 minutes. There were two different versions of the experimenter-created vignette, one with a male aggressor and one with a female aggressor. The questionnaires were randomly assigned to the participants. The CES-D was completed first, then the CSEI test, and lastly the vignettes with the questionnaire (see Appendices B and C). After the experiment was completed, the participants were debriefed. The experimenter explained that the study was looking at the relationships among self-esteem, depression, and gender in the acceptability of relational, verbal, and physical aggression.

Results

Four-way analyses of variance for repeated measures were computed for three dependent variables: justification of verbal, relational, and physical aggression. The independent variables were depression scores (high/low), self-esteem scores (high/low), gender of aggressor (male/female) and gender of participant (male/female). Overall, there was a main effect for gender of aggressor on justification of relational aggression. There was also an interaction effect for gender of aggressor and participant gender on justification of physical aggression. There were no effects for depression and for self-esteem measures.

A 2 x 2 x 2 x 2 analysis of variance showed a main effect for gender of aggressor on justification of relational aggression, $F(1, 67) = 42.65, p < .001$ ($M_s = 1.600$ ($SD = .58$) and 3.589 ($SD = 1.56$) for men and women, respectively). Participants reported that relational aggression was more acceptable for women than for men (see Figure 1). Depression, self-esteem, and gender of participant were not significantly related to justification of relational aggression.

A 2 x 2 x 2 x 2 analysis of variance showed an interaction effect for gender of aggressor by gender of participant for justification of physical aggression, $F(1, 67) = 7.22, p < .01$ (see Table 1 for means and standard deviations). Men reported that physical aggression was more acceptable in men than women did; women reported that physical aggression in women was

Barnard: The Acceptability of Aggressive Behaviors

more acceptable than men did (see Figure 2). All other main effects and interactions were not significant.

Four-way analyses of variance for repeated measures were computed for three dependent variables: justification of the victim staying in the relationship after verbal, relational, or physical aggression. The independent variables were the same as above. Overall, there was a main effect for gender of aggressor on justification of victim leaving the relationship for verbal, relational, and physical aggression. There were no effects for depression, self-esteem, or gender of participants.

A 2 x 2 x 2 x 2 analysis of variance showed a main effect for gender of aggressor on justification of the victim staying in the relationship for relational aggression, $F(1, 67) = 5.83$, $p < .05$ ($M_s = 4.88$ ($SD = 1.04$) and 5.50 ($SD = .789$) for men and women, respectively. Participants reported that the victim is more justified in staying in a relationship where the woman is the relational aggressor than if the man were the aggressor (see Figure 3). Depression, self-esteem, and gender of participant were not significant in relation to the justification of relational aggression.

A 2 x 2 x 2 x 2 analysis of variance showed a main effect for gender of aggressor on justification of the victim staying in the relationship for verbal aggression, $F(1, 67) = 4.25$, $p < .05$ ($M_s = 4.26$ ($SD = 1.563$) and 4.56 ($SD = 1.236$) for men and women, respectively. Participants reported that the victim would be less justified in staying in a relationship where a male was the verbal aggressor than if there was a female aggressor (see Figure 4). Depression, self-esteem, and gender of participant were not significantly related to justification of verbal aggression.

A 2 x 2 x 2 x 2 analysis of variance showed a main effect for gender of aggressor on justification of the victim staying in the relationship for physical aggression, $F(1, 67) = 15.40$, $p < .001$ ($M_s = 1.88$ ($SD = 1.552$) and 3.11 ($SD = 1.647$) for men and women, respectively. Participants reported that physical aggression by a woman was more accepted and justified than if a man were physically aggressive in a relationship (see Figure 5). Depression, self-esteem, and gender of participant were not significantly related to physical aggression.

Four-way analyses of variance for repeated measures were computed for three dependent variables: justification of the aggressor remaining in the relationship after relational, verbal, or physical aggression. The independent variables were the same as above. Overall, there was a main effect for gender of aggressor on the justification of the aggressor remaining in the relationship for verbal, relational, and physical aggression. There was an interaction effect among depression, self-esteem, and the gender of the aggressor to physical aggression. In addition, there was an interaction effect among self-esteem, gender of participant, and gender of the aggressor on physical aggression.

A 2 x 2 x 2 x 2 analysis of variance showed a main effect for the gender of aggressor on the justification of the aggressor remaining in the relationship with relational aggression, $F(1, 67) = 4.58$, $p < .05$ ($M_s = 4.97$ ($SD = 1.267$) and 5.68 ($SD = .589$) for men and women, respectively. Participants reported that an aggressor staying in a relationship with relational aggression was more justified with a female aggressor than a male aggressor (see Figure 6). There were no significant effects or interactions with relational aggression regarding self-esteem, depression, or gender of participant.

A 2 x 2 x 2 x 2 analysis of variance showed a main effect for gender of aggressor on the justification of the aggressor remaining in the relationship with verbal aggression, $F(1, 67) = 15.40$, $p < .001$ ($M_s = 3.82$ ($SD = 1.776$) and 5.12 ($SD = 1.038$) for men and women,

respectively. Participants reported that an aggressor staying in a relationship with verbal aggression was least justified with a male aggressor and most justified with a female aggressor (see Figure 7). All other main effects and interactions were not significant regarding verbal aggression.

A 2 x 2 x 2 x 2 analysis of variance showed a main effect for gender of aggressor on the justification of the aggressor remaining in the relationship with physical aggression, $F(1, 67) = 20.19, p < .001$ ($M_s = 2.03$ ($SD = 1.547$) and 3.65 ($SD = 1.631$) for men and women, respectively. It was reported by the participants that an aggressor remaining in a relationship with physical aggression was least justified by a male aggressor and most justified by a female aggressor (see Figure 8). No main effects or interactions were significant regarding self-esteem, depression, or gender of participant in physical aggression.

A 2 x 2 x 2 x 2 analysis of variance showed an interaction effect for depression, self-esteem, and gender of aggressor on the justification of remaining in the relationship with physical aggression, (see Table 2 for means and standard deviations), $F(1, 67) = 7.72, p < .05$. Participants reported that staying in a relationship with physical aggression by a woman was more justified than if a man was the physical aggressor. Higher depression and lower self-esteem participants reported more justification for staying in a relationship with a male physical aggressor than did participants with low depression and high self-esteem (see Figure 9). There were no effects for gender of participants.

A 2 x 2 x 2 x 2 analysis of variance showed an interaction effect for self-esteem, gender of participant and gender of aggressor on the justification of remaining in the relationship with physical aggression, (see Table 3 for means and standard deviations), $F(1, 67) = 5.39, p < .05$. Male participants with low self-esteem reported that a male physical aggressor staying in a relationship was more justified than the participants with high self-esteem. However, female participants with low self-esteem found it less justifiable for male physical aggressors to stay in a relationship than the female participants with high self-esteem. Both genders of participants reported that it was more justified for female aggressors to stay in a relationship than for male aggressors. Female participants with high self-esteem reported that it was less justified for the female physical aggressor to remain in the relationship; however, female participants with low self-esteem found it more justified for the female aggressor to stay in the relationship (see Figure 10). There were no effects for depression.

Discussion

Each of the five hypotheses was supported by the findings from the study. Physical aggression was the least accepted among the three types of aggression. Moreover, a female aggressor was more accepted than a male aggressor. An aggressor's gender also affected how acceptable it was for the victim to remain in a relationship; a victim was judged to be most justified in staying in the relationship with aggression if the aggressor were female. It was also found that it was more acceptable for a female aggressor to remain in the relationship with relational, verbal, or physical aggression than for a male aggressor to do so. Physical aggression by a woman was more justified than that by a man. Participants with higher depression and lower self-esteem reported more justification for staying in a relationship with a male physical aggressor than did participants with low depression and high self-esteem. The study found that male participants with low self-esteem found that a male physical aggressor that stayed in a relationship was more justified than those with high self-esteem. Female participants with high self-esteem reported that it was less acceptable for the female physical aggressor to remain in the relationship; however, female participants with low self-esteem found it more justified for the

Barnard: The Acceptability of Aggressive Behaviors

female aggressor to stay in the relationship. It was found that men were more accepting of male physical aggressors than women were, and men were less accepting of female aggressors than women were.

In the present study, several findings were discovered that are extremely critical to gaining a better understanding of dating violence in the U.S. The interaction effect for gender of aggressor by gender of participant for justification of physical aggression showed that each gender was more accepting of the same gender's physical aggressions and less accepting of the opposite gender's aggressions. This finding can be used to show that a person may find it more feasible to be physically aggressive to one's partner, but find it less acceptable for the partner to be physically aggressive to oneself. The tendency to be more accepting of aggression in one's own gender may be due to one's identification with the aggressor. It may also be that the individuals themselves have been physically aggressive to their partners and to reduce cognitive dissonance, they find the aggression more justifiable. With gender playing such an important role in the acceptability of aggressive behaviors in dating relationships, it is crucial to take notice of the differences in the genders' perceptions when studying dating violence.

Remaining in a relationship where relational, verbal, and physical aggression occurs is not healthy and can lead to more severe aggression and violence (Toldos, 2005). It was found that there was a main effect for gender of aggressor in each of the three types of aggression studied, relational, verbal, and physical aggression. In each type of aggression, it was found that the female aggressor was more accepted than the male aggressor, by both genders. The findings of this study regarding the gender of the aggressor coincide with the findings by Cauffman, Feldman, Jensen, and Arnett (2000). In society, it is considered more acceptable for a woman to "give the silent treatment," call someone a name, or to shove or slap her partner. Because women are generally thought of as less harmful than men, it is more acceptable behavior for a woman to be aggressive towards her partner. Dating and domestic violence have a negative connotation and generally refer to a man being aggressive towards a woman, which aids in the higher unacceptability of male aggression.

In addition to the effects that gender of aggressor has on the victim staying in an aggressive relationship, it also has an impact on the aggressor remaining in the relationship. A main effect was found for gender of aggressor on the justification of remaining in the relationship with relational, verbal, and physical aggression. An aggressor remaining in the relationship where there was a female aggressor was the most acceptable. The female aggressor was viewed as having a lesser impact than a male aggressor and was more socially accepted. The gender of the aggressor is a factor that aids in the determination of the acceptability of the aggressive behaviors in the dating relationship.

Not only does the gender of the aggressor play an important role in justifying aggressive behaviors, but depression and self-esteem also have an effect. There was an interaction effect found for the gender of aggressor, depression, and self-esteem on the justification of remaining in the relationship with physical aggression. Those with higher depression and lower self-esteem found that it was more acceptable for the aggressor to stay in the relationship with physical aggression with a male aggressor than those with low depression and high self-esteem. The finding that those with higher depression were more accepting of the aggressor remaining in the relationship with physical aggression is supported by the study conducted by Katz and Arias (1999). The people who are more vulnerable due to depression and low self-esteem are at a high risk of remaining in an abusive relationship. In order to help people to get out of unhealthy relationships, such as those with dating or domestic violence, it is imperative to assess the

person's emotional state. Reducing depression and increasing one's self-esteem will increase the likelihood of the person leaving the abusive relationship (Katz & Arias, 1999).

As previously established, self-esteem plays a large role in the acceptability of physical aggression in dating relationships. An interaction effect was found for self-esteem, gender of participant, and gender of aggressor on the justification of remaining in the relationship with physical aggression. Individuals who had low self-esteem found it more acceptable for the same-gender aggressor to remain in the physically aggressive relationship. As found in the study by D'Zurilla, Chang, and Sanna (2003), low self-esteem was associated with a higher acceptability of remaining in an abusive relationship. Because the people with low self-esteem found it more justified for the same-gender aggressor to remain in the relationship, the finding demonstrates that low self-esteem aids in a person's decision to stay in an unhealthy relationship. With an unhealthy mental state, people are more susceptible to abusive relationships and are less likely to leave the relationship because of how poorly they think of themselves (D'Zurilla, Chang, and Sanna, 2003). It is imperative to focus on one's mental stability when viewing a person's likelihood of remaining in an abusive relationship with physical aggression.

In regards to this study, there are some shortcomings in the study. Social desirability may have had an impact on the participants' responses and thus altered the results, which also coincides with the difficulties experienced in other studies in this field (Jenkins & Aube, 2002; Lewis & Fremouw, 2001). Since it is more socially accepted for women to present relational, verbal, or physical aggression, this may have swayed some participants' responses to the questionnaire. Also, the participants may not have answered honestly on the CES-D or CSEI assessments because of denial or yet again the social desirability factor. Because there was a self-report design for a portion of the study, there is the possibility for the participant to withhold their true feelings or thoughts. Also, there may have been a subject effect where the participants attempted to figure out the hypothesis and tried to comply or sabotage the results; however, this is more unlikely since the participants were not very experienced in psychology techniques.

Research in the field of dating and domestic violence has been growing over the past two decades, but there is much that is not understood. For future research, it would be helpful to get a better understanding on why the participants felt that it was more acceptable for female aggressors than male aggressors to remain in a physically aggressive relationship. Many people do not realize how damaging relational and verbal aggression can be; therefore, further research is needed to help to make others aware of the consequences that accompany these types of aggression in dating relationships. Better tools are needed to help people to leave abusive relationships, as well as further research regarding self-esteem and depression for more efficient prevention programs and counseling.

Barnard: The Acceptability of Aggressive Behaviors

References

- Archer, J., & Haigh A. (1999). Sex differences in beliefs about aggression: Opponent's sex and the form of aggression. *British Journal of Social Psychology, 38*, 71-84.
- Brodbelt, S. (1983). College dating and aggression. *College Student Journal, 17*, 273-277.
- Callahan, M., Tolman, R., & Suanders, D. (2003). Adolescent dating violence victimization and psychological well-being. *Journal of Adolescent Research, 18*, 664-681.
- Cauffman, E., Feldman, S., Jensen, L., & Arnett, J. (2000). The (Un)Acceptability of violence against peers and dates. *Journal of Adolescent Research, 15*, 652-673.
- Coopersmith, S. (1987), *Self-Esteem Inventories*. Palo Alto: Consulting Psychologist Press.
- D'Zurilla, T., Chang, E., & Sanna, L. (2003). Self-esteem and social problem solving as predictors of aggression in college students. *Journal of Social and Clinical Psychology, 22*, 424-440.
- Foy, D. & Card, J. (1987). Combat-related post-traumatic stress disorder etiology replicated findings in a national sample of Vietnam-era men. *Journal of Clinical Psychology, 43*, 4-28.
- Jenkins, S. & Aube, J. (2002). Gender differences and gender-related constructs in dating aggression. *Society for Personality and Social Psychology, 28*, 1106-1118.
- Jezi, D., Molidor, C., & Wright, T. (1996). Physical, sexual and psychological abuse in high school dating relationships: Prevalence rates and self-esteem issues. *Child and Adolescent Social Work Journal, 13*, 69-87.
- Katz, J., & Arias, I. (1999). Psychological abuse and depressive symptoms in dating women: Do different types of abuse have differential effects? *Journal of Family Violence, 14*, 281-295.

- Kuffel, S. & Katz J. (2002). Preventing physical, psychological, and sexual aggression in college dating relationships. *The Journal of Primary Prevention, 22*, 361-374.
- Lewis, S., & Fremouw, W. (2001). Dating violence: A critical review of the literature. *Clinical Psychology Review, 21*, 105-127.
- Linder, J., Crick, N., & Collins, W. (2002). Relational aggression and victimization in young adults' romantic relationships: Associations with perceptions of parent, peer, and romantic relationship quality. *Social Development, 11*, 69-86.
- O'Leary, K., & Slep A. (2003). A dyadic longitudinal model of adolescent dating aggression. *Journal of Clinical Child and Adolescent Psychology, 32*, 314-327.
- Radloff, L. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401
- Riggs, D. & O'Leary K. (1996). Aggression between heterosexual dating partners. *Journal of Interpersonal Violence, 11*, 519-540.
- Shaver, P., & Brennan, K. (1991). Measure of depression and loneliness. In Robinson, J.P., Shaver, P. R., & Wrightsman, L. S., (Eds.). *Measures of personality and social psychological attitudes*, (Vol 1). San Diego: Academic Press.
- Stets, J. (1992). Interactive processes in dating aggression: A national study. *Journal of Marriage and the Family, 54*, 165-177.
- Toldos, M. (2005). Sex and age differences in self-estimated physical, verbal and indirect aggression in Spanish adolescents. *Aggressive Behavior, 31*, 13-23.
- Watson, J., Cascardi, M., Avery-Leaf, S., & O'Leary K. (2001). High school students' responses to dating aggression. *Violence and Victims, 16*, 339-348.

Barnard: The Acceptability of Aggressive Behaviors

Summer 2005

Dear Research Participant:

I am Kirsten Barnard, an undergraduate student in the College of Liberal Arts and Social Sciences at Georgia Southern University. I am conducting this research as a requirement of the Ronald E. McNair Post baccalaureate Achievement Program at Georgia Southern University.

The present study involves research and is designed to get a better knowledge in dating relationships. The purpose of the research is to help people to maintain healthy relationships. The opportunity to participate in the study is extended to all Introduction to Psychology students enrolled in the Summer 2005 Term A classes. The experiment should take no longer than 15 minutes of your time.

Once the study has begun, you will be asked to complete two different assessments. Each test will ask several questions, and you will simply respond according to the scale given on the form. After these tests are completed, you will be asked to read three short stories and to complete the accompanying questionnaire. There will be several different versions that will be used in the study, which will be randomly assigned to each participant.

This study has minimal risks and discomforts to the participant. Some questions might be slightly upsetting to some participants. The questions have been carefully selected in order to minimize discomfort in participants. Feel free to omit any item that makes you feel uncomfortable. If any discomfort is experienced and you would like to talk with someone professionally, please contact the Counseling Center at 681-5541.

All information collected from the study will be kept in the strictest of confidence. The information will be used solely for the research in this study. The study will not use any identifying information of a participant; therefore the information is ensured to remain confidential. The only people who will have access to the records will be the experimenter and overseeing professor. Be assured that your responses will be kept confidential and there is no identifying information on the questionnaires.

By participating in this study, you are entitled to a small amount of extra credit by your Introduction to Psychology professor, as outlined in your Introduction to Psychology course. It is your decision to participate and to receive extra credit for your class.

You have the right to ask any questions about the research at any time. If you have any questions about this study, you may contact me at (912) 658-5881 or Dr. Janice Kennedy, the overseeing professor, at (912) 681-5504. If you have any questions or concerns about your rights as a research participant, contact the Office of Research Services and Sponsored Programs at (912) 681-7758 or email at oversight@georgiasouthern.edu.

McNair Scholars Journal of Georgia Southern University, Vol. 6, 2005

The decision to participate in this study is completely voluntary and your refusal to participate or to withdraw at any time will involve no penalty or loss of benefits to which you, as the participant, are otherwise entitled.

You will be given a copy of this consent form to keep for your records.

Please be sure to sign the appropriate roster for your Introduction to Psychology class so that you will receive credit for your participation.

Title of Project: The Acceptability of Aggressive Behaviors in Dating Relationships

Principal Investigator: Kirsten Barnard, (912) 658-5881, Kbarnard@georgiasouthern.edu

Research Advisor: Dr. Janice Kennedy, (912) 681-5504, Jkennedy@georgiasouthern.edu

Thank you for assisting in this study.

Kirsten Barnard

After reading the description of the research study, I agree to participate in the study described above, but I understand that I am choosing to participate on my own free-will and may withdraw at any time without penalty.

Print

Signature

Date

If you would like a summary of the result when the study is completed, please PRINT your name and Post Office Box number below:

Barnard: The Acceptability of Aggressive Behaviors

Bob and Susan have been dating for about a year. They care a lot about one another and spend most of their free time together. Bob forgets the anniversary of their first date and doesn't seem to realize how important this occasion is. Susan is very upset over Bob forgetting this important anniversary, and she decides to "give him the silent treatment."

How justified is Susan's behavior?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Will Susan be justified in staying in the relationship with Bob?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Will Bob be justified in staying in the relationship with Susan?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Jim and Becky have been dating for about ten months. They are very close to one another and are together a lot of the time. Jim and Becky are watching TV before they go out to eat on a Friday night and Jim is watching a show that Becky doesn't like. Becky asks for him to change the channel, but Jim refuses. After many attempts to get Jim to change the show, Becky calls Jim a "jerk."

How justified is Becky's behavior?

Very Justified Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Should Becky stay in the relationship with Jim?

Very Justified Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Should Jim stay in the relationship with Becky?

Very Justified Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Barnard: The Acceptability of Aggressive Behaviors

David and Sara have been dating for about a year and a half. They are very close and care a lot about one another. They spend a lot of time together each day. After the two go out for lunch, they decide to go home and rest before meeting some friends later on in the day. Sara is upset because it seemed that David flirted with the server at the restaurant. David denies flirting with the other woman. The argument gets more and more heated and Sara shoves David.

How justified is Sara's behavior?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Should Sara stay in the relationship with David?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Should David stay in the relationship with Sara?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Bob and Susan have been dating for about a year. They care a lot about one another and spend most of their free time together. Susan's best friend is about to have her 20th birthday, and a party has been planned. Unfortunately, Bob has already made plans to attend the big game with his buddies on the same night, but he agrees to attend the birthday party with Susan. At the party, Bob "gives Susan the silent treatment."

How justified is Bob's behavior?

Very Justified			Not Justified at All			
6	5	4	3	2	1	

Explain the reasons for your response?

Should Susan stay in the relationship with Bob?

Very Justified			Not Justified at All			
6	5	4	3	2	1	

Explain the reasons for your response?

Should Bob stay in the relationship with Susan?

Very Justified			Not Justified at All			
6	5	4	3	2	1	

Explain the reasons for your response?

Barnard: The Acceptability of Aggressive Behaviors

Jim and Becky have been dating for about ten months. They are very close to one another and are together a lot of the time. Jim and Becky are watching TV before they go out to eat on a Friday night and Becky is watching a show that Jim doesn't like. Jim asks for her to change the channel, but Becky refuses. After many attempts to get Becky to change the show, Jim calls Becky a "jerk."

How justified is Jim's behavior?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Should Becky stay in the relationship with Jim?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

Should Jim stay in the relationship with Becky?

Very Justified

Not Justified at All

6 5 4 3 2 1

Explain the reasons for your response?

David and Sara have been dating for about a year and a half. They are very close and care a lot about one another. They spend a lot of time together each day. After the two go out for lunch, they decide to go home and rest before meeting some friends later on in the day. David is upset because it seemed that Sara flirted with the server at the restaurant. Sara denies flirting with the other man. The argument gets more and more heated and David shoves Sara.

How justified is David's behavior?

Very Justified							Not Justified at All	
6	5	4	3	2	1			

Explain the reasons for your response?

Should Sara stay in the relationship with David?

Very Justified							Not Justified at All	
6	5	4	3	2	1			

Explain the reasons for your response?

Should David stay in the relationship with Sara?

Very Justified							Not Justified at All	
6	5	4	3	2	1			

Explain the reasons for your response?

Barnard: The Acceptability of Aggressive Behaviors

Table 1

Means and Standard Deviations for Justification of Physical Aggression by Gender of Aggressor and Gender of Participant

Participant Gender	Gender of Aggressor	
	Male	Female
Male	2.55 (2.19)	1.50 (0.53)
Female	1.12 (0.33)	1.88 (1.09)

Table 2

Means and Standard Deviations for Justification of Physical Aggression for the Aggressor

Staying by Depression,, Self-esteem, and Gender of Aggressor

Gender of Aggressor	Depression	
	High	Low
<hr/>		
<u>Female</u>		
High Self-esteem	4.67 (1.53)	3.27 (1.35)
Low Self-esteem	3.56 (1.75)	4.25 (2.06)
<u>Male</u>		
High Self-esteem	1.60 (0.89)	2.55 (2.12)
Low Self-esteem	2.09 (1.45)	1.43 (0.79)

Barnard: The Acceptability of Aggressive Behaviors

Table 3

Means and Standard Deviations for Justification of Physical Aggression for the Aggressor

Staying by Self-esteem, Gender of Participant, and Gender of Aggressor

Gender of Aggressor	Self-esteem	
	High	Low
<u>Female</u>		
Male Participant	4.00 (0.82)	4.00 (1.83)
Female Participant	3.40 (1.65)	3.63 (1.82)
<u>Male</u>		
Male Participant	2.20 (2.17)	2.75 (1.26)
Female Participant	2.27 (1.79)	1.57 (1.16)

Figure 1

Justification of Relational Aggression by Gender of Aggressor

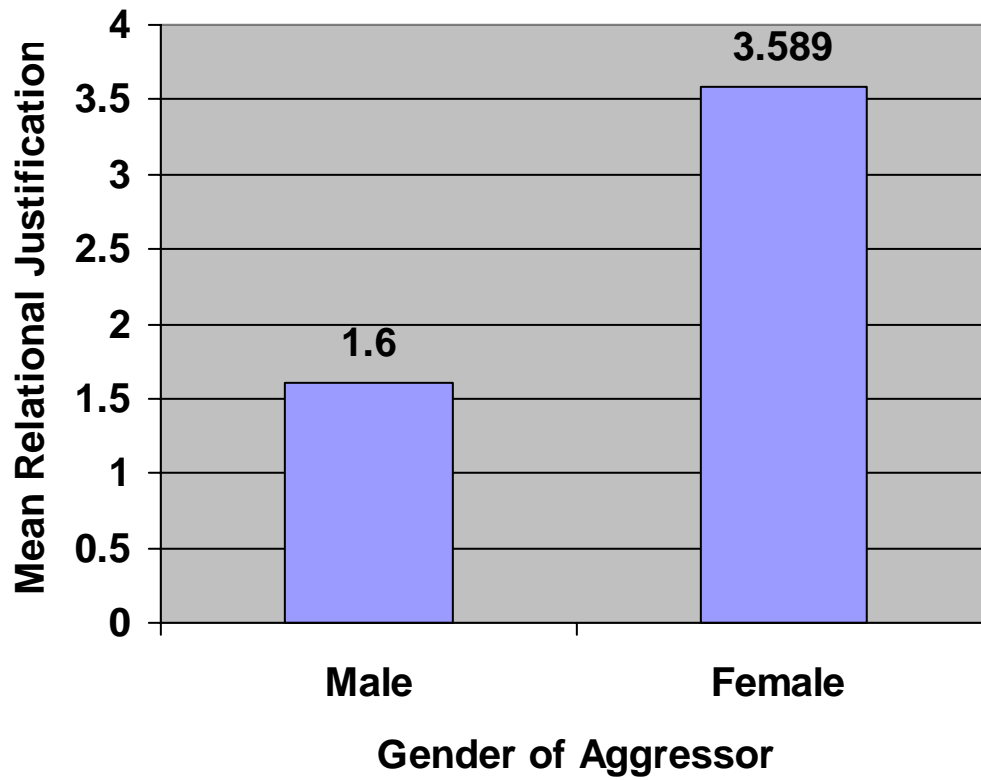


Figure 2

Justification of Physical Aggression by Gender of Aggressor and Gender of Participant

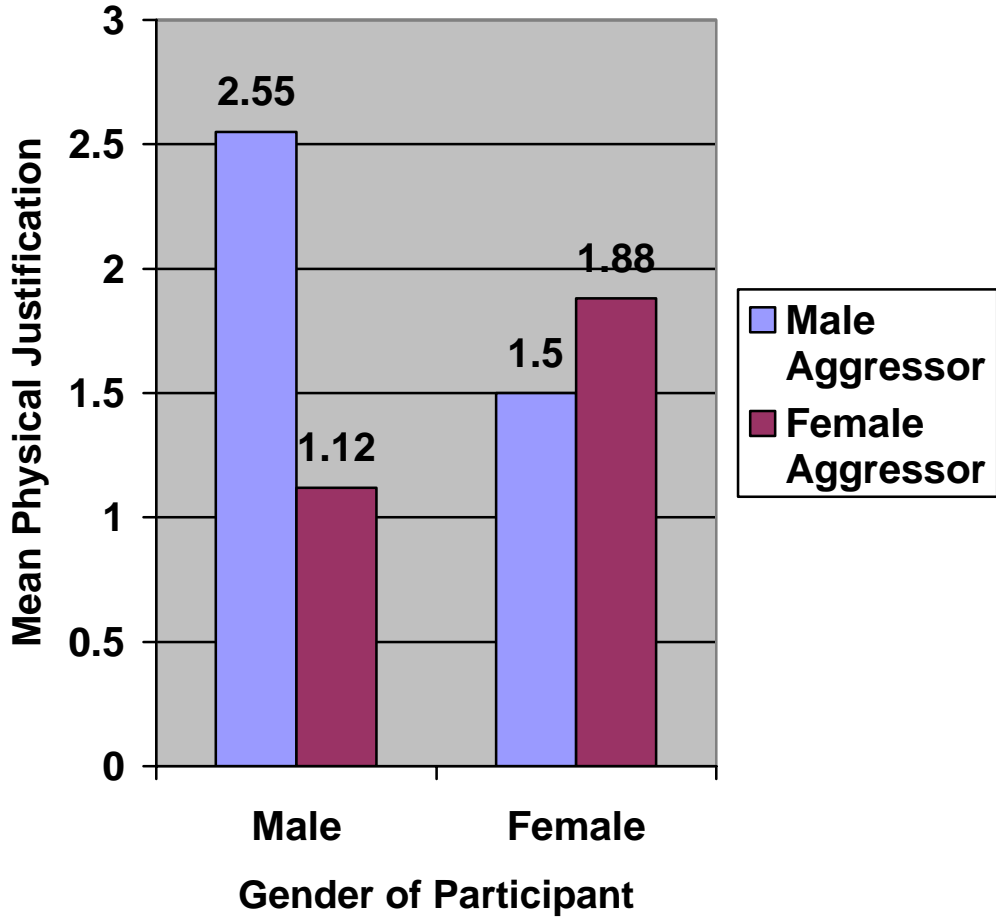


Figure 3

Justification of Relational Aggression and Victim Staying by Gender of Aggressor

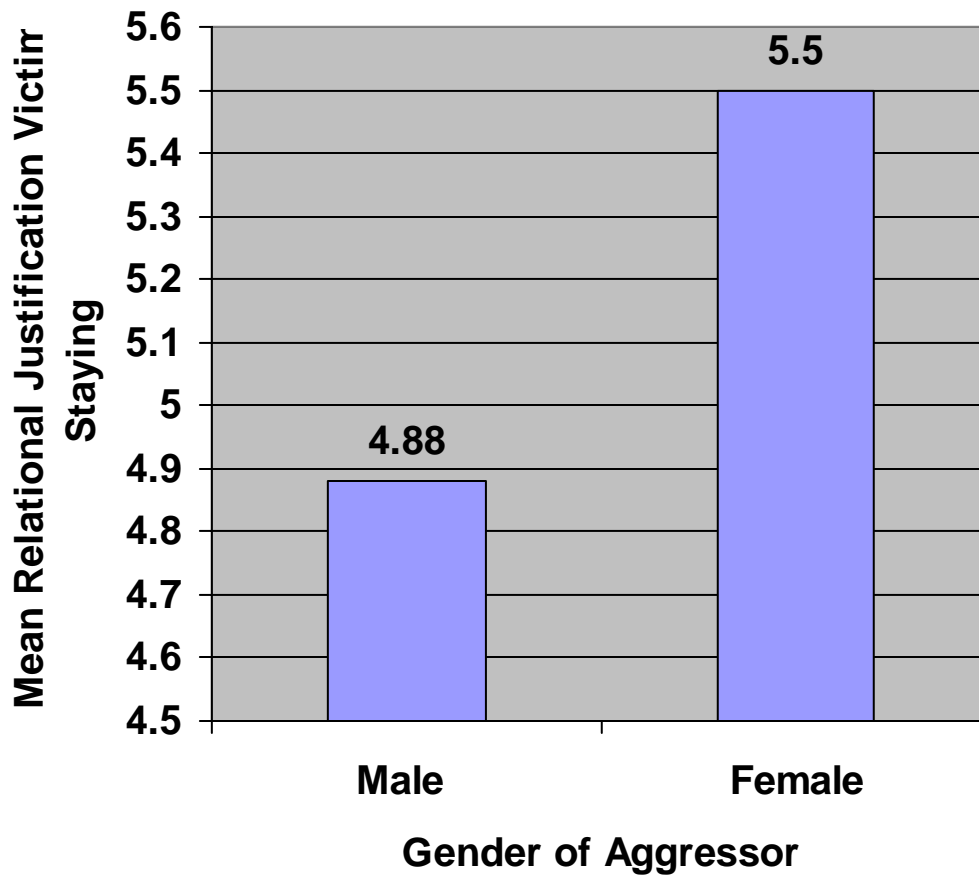


Figure 4

Justification of Victim Staying in Verbal Aggression by Gender of Aggressor

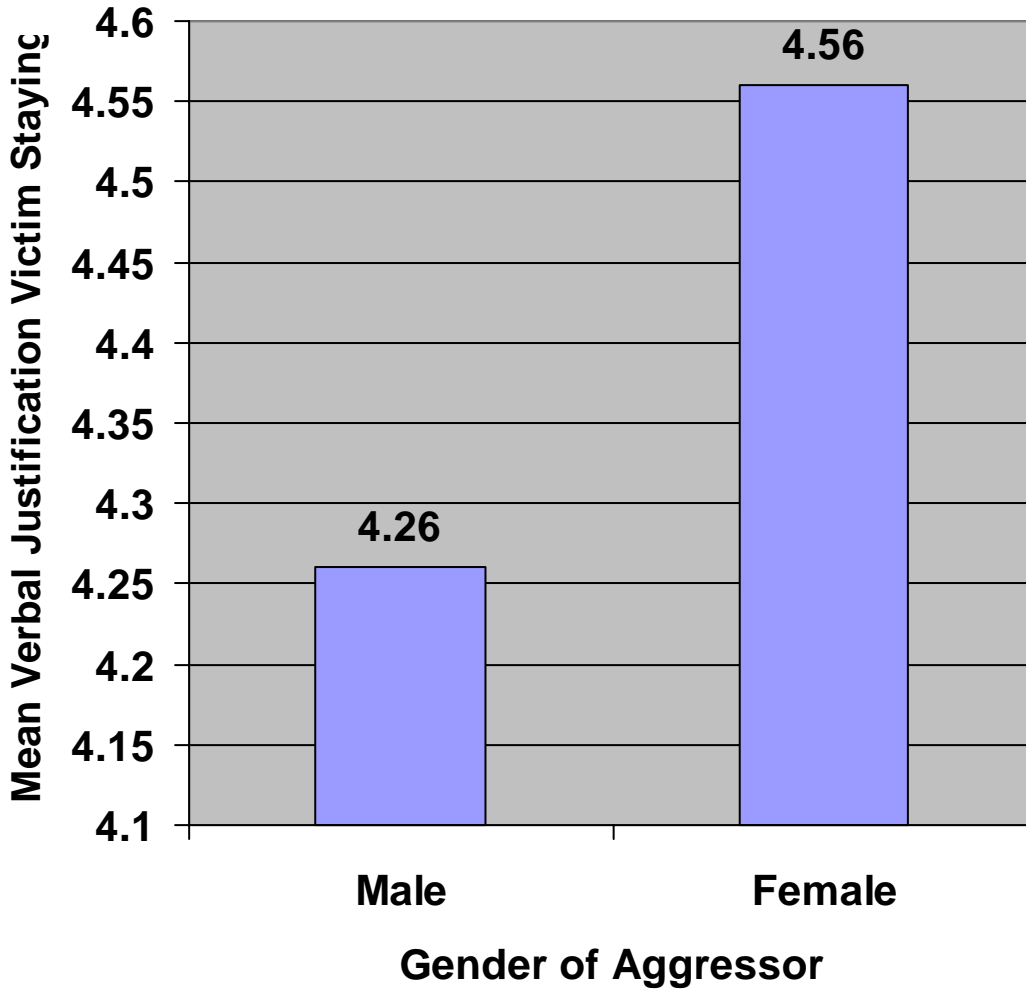


Figure 5

Justification of Physical Aggression for Victim Staying by Gender of Aggressor

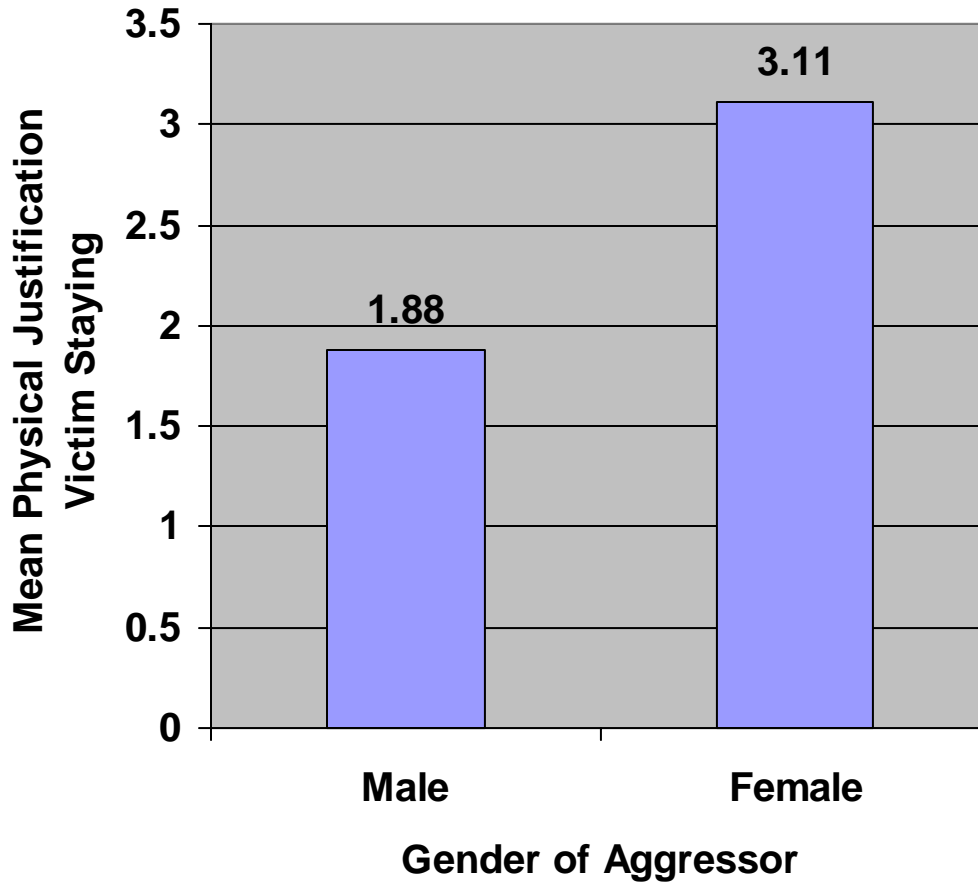


Figure 6

Justification of Relational Aggression for Aggressor Staying by Gender of Aggressor

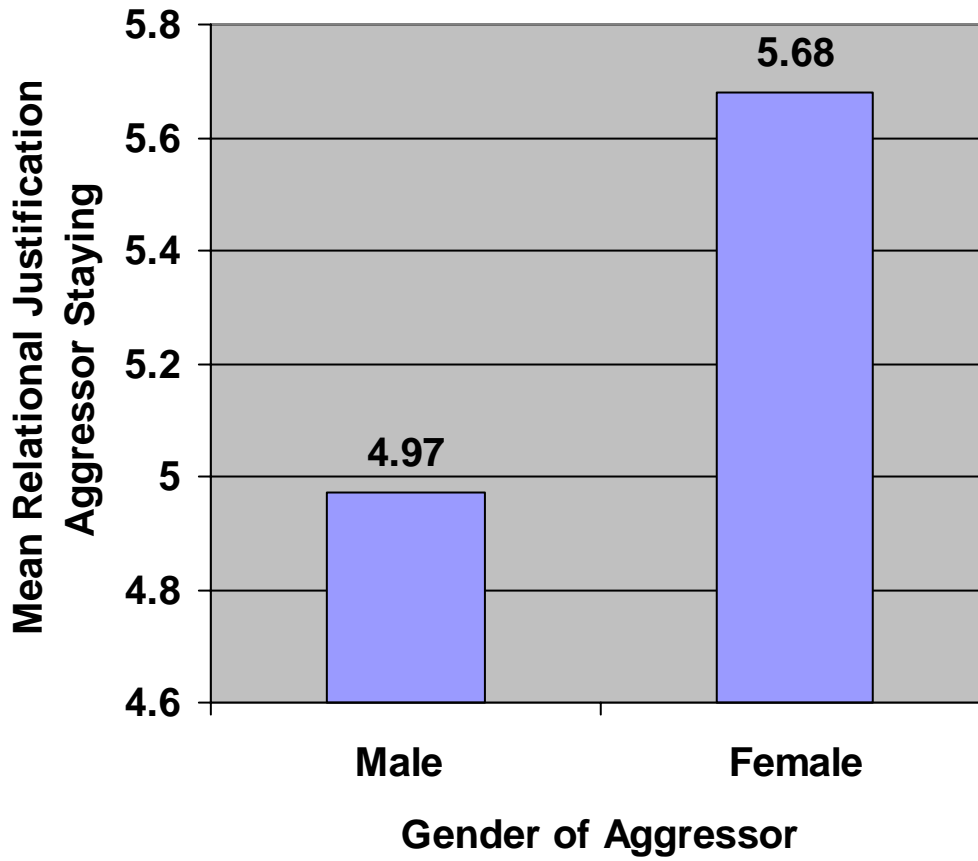


Figure 7

Justification of Verbal Aggression for Aggressor Staying by Gender of Aggressor

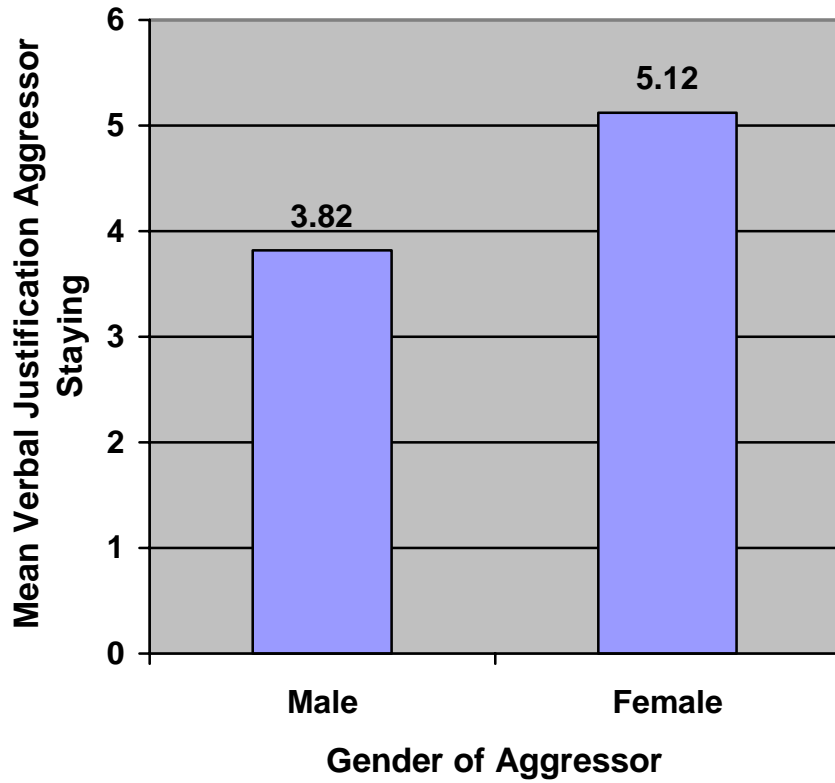


Figure 8

Justification of Physical Aggression for Aggressor Staying by Gender of Aggressor

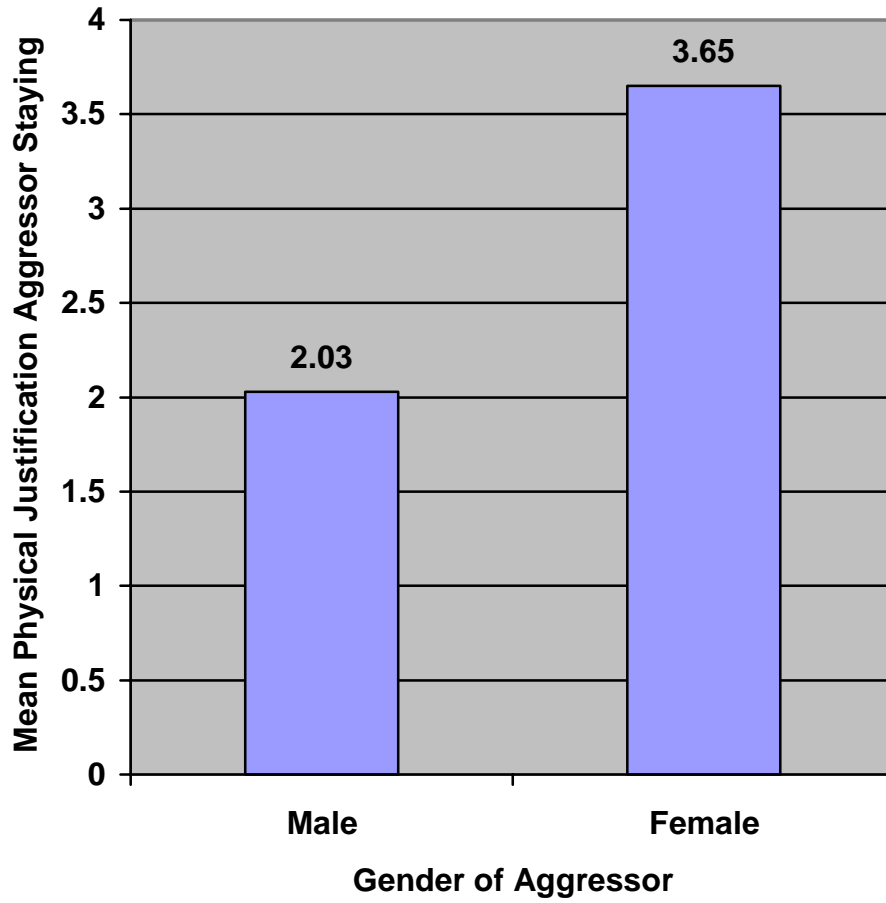
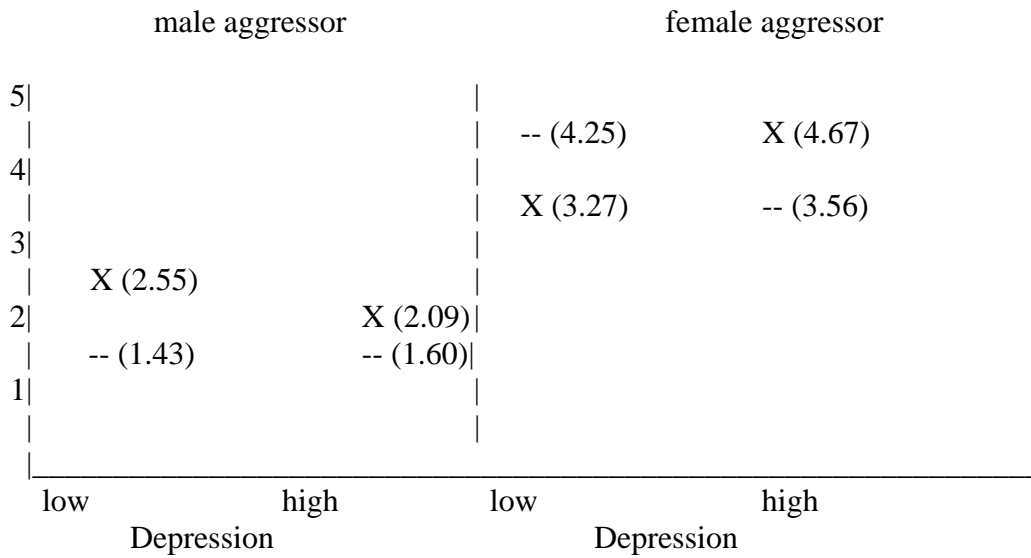


Figure 9

Justification of Physical Aggression for Aggressor Staying by Depression, Self-esteem, and Gender of Aggressor

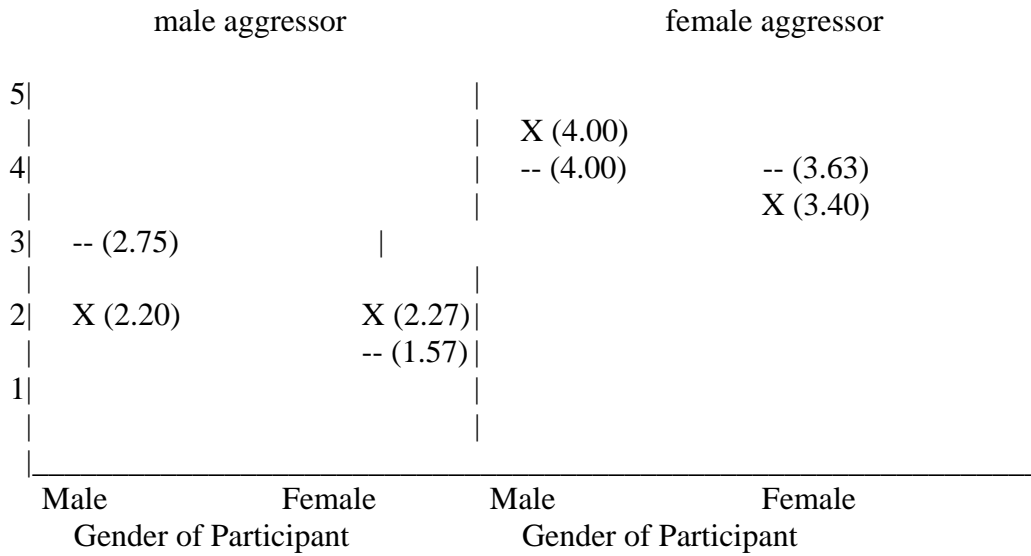


Low Self-esteem --
High Self-esteem X

Barnard: The Acceptability of Aggressive Behaviors

Figure 10

Justification of Physical Aggression for Aggressor Staying by Self-esteem, Gender of Participant, and Gender of Aggressor



Low Self-esteem --
High Self-esteem X

A RESPONSE TO MY BANK TELLER: HOW HAS A NATION OF IMMIGRANTS BECOME SO ANTI-IMMIGRANT?

Angel Beal, McNair Scholar

Dr. Darin Van Tassell, Research Mentor
Center for International Studies

Abstract

The United States has a rich history as a diverse melting pot. Thus, I was shocked and appalled when my bank teller made the following remark, "Sometimes don't you get tired of them [Hispanics] coming over here and taking our jobs? They could at least learn the language!" This research study is my response. This paper will begin by showing that anti-immigrant sentiments did not develop overnight. Not only will this paper reveal that such anti-immigrant sentiments are not new, but the origins of such sentiments began quickly after the arrival of the first immigrants. In executing this research, I will perform comparative case studies, paying specific attention to the experience of three groups of immigrants to the U.S. -- the English, the Italians, and the Chinese. An in-depth analysis of these three cases will reveal how ethnicity as well as religion has served to create an anti-immigrant sub-culture in a nation comprised of immigrants itself. Upon completion of the case studies analysis, this paper will then seek to provide insight into the challenges posed in today's society against Hispanics.

Introduction

In the fall of 2004, I journeyed to my local bank branch in order to replace a lost debit card. As I sat down, the teller, who was quite friendly, quickly engaged me in the routine questions asked when one finds out the other is a college student. She asked me where I was from and what I was studying. I proudly proclaimed to her not only was I from a small town in middle Georgia, I was also pursuing a dual B.A. degree in International Studies and Spanish. She smiled and told me how interesting my studies must be. Then, she cut her eyes to the side, lowered her voice and said, "Sometimes don't you get tired of them [Hispanics] coming over here and taking our jobs? They could at least learn the language!"

It was not the first time I had heard such sentiments expressed, of course. One cannot live in the southern United States and fail to encounter the anti-Hispanic sentiments that have increased with the latest wave of immigrants from Latin America and the recent growth of Hispanic populations in the U.S. (U.S. Census Bureau). But unlike previous times, I wanted to respond to the bank teller. After all, my major and my own Spanish speaking skills have put me in a position to do so. I wanted to say something immediately, something so clever that she would understand why I was aghast that she assumed I felt that same way that she did. Alas, I had no ten second response that would have felt satisfactory. It was some time later that I realized the only way I could educate her about my views was to develop a more scholarly response. So this paper represents my efforts to provide an answer to my bank teller. Indeed, this paper is ultimately an effort to come to grips with an interesting puzzle: How has a nation of immigrants become so *anti-immigrant*?

Research Method:

In order to understand how the components of this anti-immigrant sub-culture have formed, various theories have been offered. Ethnic loyalties (Steinberg 245) as well as a general consensus concerning morality and religion (Johnson 20), are all offered as theories as to why the United States has become a nation of unmeltables. A brief overview of these theories demonstrates the difficulty in offering any one explanation for understanding the rise of an anti-immigrant subculture. Nonetheless, I will begin this paper by showing that anti-immigrant sentiments did not develop overnight. This paper will not only reveal that such anti-immigrant sentiments are not new, but the origins of such sentiments began quickly after the arrival of the first immigrants.

This paper will use a comparative case-study method. Theory building, through case studies has proven to a valuable asset in the field of political science. The organization of this study will attempt to give its evidence in the form of a series of heuristic case studies as described by Alexander George (Lauren 51-52). In executing this paper, I will perform comparative case studies paying specific attention to the experience of three groups of immigrants to the U.S. -- the English, the Italians, and the Chinese. An in-depth analysis of these three cases will reveal how ethnicity as well as religion has served to create an anti-immigrant sub-culture in a nation comprised of immigrants itself. Upon completion of the case studies analysis, this paper will then seek to provide insight into the current wave of immigration—namely Hispanics.

English

Ours is a nation clearly composed of immigrants. While relatively young, over the past two centuries, the United States has attracted more immigrants than any other country since its inception (U.S. Census Bureau). Although they were not the first European immigrants, the English were the first Europeans to have a successful colony in the New World (Dinnerstein and Reimers 1). After experiencing extreme persecution in their English homeland, the Pilgrims decided they needed a place to go where they would not be persecuted because of their religious convictions (Langton 74-75). They would be followed, ten years later, by the Puritans who viewed colonizing the New Worlds as a type of religious experiment (Johnson). Indeed, Paul Johnson likens the Puritans to the biblical Israelites (Johnson). They regarded themselves as chosen people, whose destiny was to spread the word of their God (Johnson). So enthralling was their mission that the first governor of Massachusetts, James Winthrop, proclaimed, “God hath hereby cleared our title to this place” after receiving news that all the Indians within a 300 mile radius had succumbed to smallpox (qtd. in Johnson). Although the founding of the colonies were by a people who wanted to be free to worship God as they saw fit, the English were not welcoming to others who deviated from their own beliefs (Dinnerstein and Reimers 2). The English would quickly be joined by other immigrant groups from Germany, France, Portugal, Spain, Holland, and Great Britain. Indeed, these other immigrant groups were expected to absorb the English culture before they could gain acceptance as “Americans” in the eyes of the English (Dinnerstein and Reimers). Although the Irish, Germans, and other Europeans were considered white, they were still considered inferior if they were not Protestant.

The paradox surrounding Anglo-America’s attitude toward foreign Europeans would only mark the beginning of a sub-culture built on Anglo-dominance. Over time it no longer was an issue as long as you were white and Protestant. As more and more immigrants migrated to America, with different worship practices and darker skin tones, the rejection of Anglo-culture

would become threatened. The only way to solidify their dominance over other cultures was by declaring them to be foreign and find ways to restrict these unwanted people from entering the United States.

Italians

Between 1789 and 1924 almost five million Italians immigrated to the United States. A cholera epidemic, an increase in population paralleled with a decrease in jobs, and a slew of natural disasters were all contributors to this mass immigration (Barone 126-127). Albeit they were in a new land, the Italians were unaware that they were viewed as foreigners (Novak 80). In fact, as stated by Nathan Glazer, more often than naught it was Anglo-America that labeled them as ethnic (Novak 80). Italian immigrants did not view themselves as Italians; they considered themselves to be either *Calabrese* or *Siciliani* (Novak 80).

Although obviously attached to the Roman Catholic Church, the early immigrant Italians did not (at that time) share the same devotion to Catholicism as the Irish in America (Dinnerstein and Reimers 50). However, with each passing generation growing up within the United States, the Italians became increasingly active in the practice of Catholicism (Barone 136). However, the Catholic churches in America were anything but welcoming (Mangione and Morreale 328). There was strong opposition between Italians and Irish Catholics, and many Italians were forced to sit in the back of the churches with black worshippers (Mangione and Morreale 328). Indeed, it would take an issuance in 1899 from the Pope to America's Catholic Churches for there to be an outreach to the immigrants of the United States (Mangione and Morreale 329).

There was an extreme abhorrence for Catholicism that still lingered following the Reformation in England (Anderson 100). Indeed, there were many Protestant societies, including both the American Sunday School Union and Ku Klux Klan, which sought to protect America from this Catholic invasion (Anderson 102-104). Protestant America did not like this sudden increased devotion to the Catholic Church by the Italians (Daniels 49). Many Protestants believed that Catholicism demanded supreme allegiance to the Pope, thus making the Italians unwilling to accept their Anglo ideals (Dinnerstein and Reimers 60). Although initially hostile to the Italians, the Protestant churches decided to counter the growing Catholic population by conversion (Mangione and Morreale 330). The churches began to evangelize to the Italians, focusing primarily on the women, who would then no doubt convert the rest of the family (Mangione and Morreale 330). Incentives such as food and childcare were offered to allure poor Italians to services in order to encourage their religious conversions (Mangione and Morreale 330). However, Protestant America's attempts to convert Italians to "more American" forms of Christianity proved to be futile with less than 25,000 converts (Mangione and Morreale 331).

Furthermore, due to the fact that Italians were darker than most of the other European immigrant groups, the Italians were viewed as not even second class citizens by many in the U.S. They were often regarded as being "lazy", and one observer labeled Italians "just as bad as the Negroes" (qtd, in Mangione and Morreale 40, 203). In the South some Italians were even forced to attend all-black schools (Dinnerstein and Reimer 40), and there were even incidences of lynching in Louisiana during the 1890s (Mangione and Morreale 143).

In short, Anglo-Saxon culture was being threatened by this mass immigration and many Americans believed that it must be brought quickly to an end. As quoted by Ellwood P. Cubberly "...our task is to break up these groups...and implant in their children as far as can be done, the Anglo-Saxon conception of righteousness..." (Mangione and Morreale 217). Anglo-America was crying for a restriction of immigration from Eastern and Southern Europe (Mangione and Morreale 217). During the time of this mass Italian immigration, Congress passed its first Quota

Act in 1921, which would be followed by the more restraining Immigration Act of 1924 (History Matters). With the passing of the Immigration Act of 1924, or Johnson-Reed Act, not only was Italian immigration curbed, so were other foreign-born groups. The Johnson-Reed Act was a permanent quota law limiting the amount of immigrants eligible to enter the United States per country (Baltzell 203). It allowed for only two percent of the “foreign born” of a particular group in the United States based on the 1890 census (Dinnerstein and Reimers 71). Before the Johnson-Reed Act, an average of 200,000 Italians entered the United States yearly. After the Act, which was an obvious attempt to limit immigration from Southern and Eastern Europe which had occurred mainly after 1890, the quota for Italians was around 5,000, Poland 6,000 and Russia just under 3,000 (Dinnerstein and Reimers 72).

It would not be until the end of the 19th century that America would find a new immigrant group to direct to project their sentiments onto. During the 1870s a new movement would begin that would direct anti-immigrant away from the Italians. The increased number of Chinese immigrants was becoming a powerful political issue within the halls of Congress. Even the Italians would join in the anti-Chinese movement in hopes of directing public bigotry from themselves and affirming their white status in the United States (Tong 39). For the first time in the United States, anti-immigrant sentiments would be due to ethnicity instead of religion (Daniels 10).

Chinese

Although there are records of Chinese workers as early as 1571, mass immigration to the United States did not begin until after 1849 due to the California gold rush (Reimers 38). However, the majority of the Chinese arrived after the initial gold strike so that all many found was hard work in lieu of gold (Reimers 40). The Chinese were initially welcomed among the diverse group of forty-niners which included Europeans, Mexicans, Chileans and Peruvians (Reimers 41). However, as their numbers increased (there were over 100,000 by 1880) and wages decreased, the Chinese began to be viewed as enemies who were stealing jobs (Dinnerstein and Reimers 57).

Unlike other European immigrants, the Chinese were visibly distinct from their White counterparts (Aarim-Heriot). By the early 1870s, anti-Chinese resentment had grown and a movement was being born (Tong 37). Physical hostility as well as local legislative racism prevailed against the Chinese (Tong 31-36). Some of the laws passed against the Chinese were completely ludicrous. For example, 1870 California legislation required Chinese immigrants to make available proof that he or she exemplified “good character” (Tong 35). The anti-Chinese movement became such a hot topic that restricting Chinese immigration became a vital issue in politics (Gyory 90). In fact, the Presidential races of 1876 and 1880 were both centered on the restriction of Chinese immigration (Gyory 90).

Up until the immigration of the Chinese, only two races were recognized in the United States, Black and White (Brown Quarterly). Since Chinese immigrants were neither, a few were allowed naturalization, but not all (Brown Quarterly). In 1868, the Burlingame Treaty was ratified with China which recognized the “right of man to change his home and allegiance” (Daniels 12). However, the treaty mentioned nothing of naturalization (Daniels 12). Later in July 1870, the debate for the naturalization presented itself before Congress (Daniels 14-15). Interestingly, the motion would be ultimately dismissed for the Chinese but accepted for persons from Africa or of African descent (Aarim-Heriot 151). Indeed, it would not be until seventy-three years later, that the Chinese, or any other persons of Asian ethnicity, would be eligible for citizenship in the United States (Daniels 16). Furthermore, the Burlingame Treaty would be re-

negotiated so that the United States would have the right to “regulate, limit, or suspend” any person of Chinese ethnicity in the United States or traveling to the United States (Daniels 18).

The United States’ “gate keeping” policy can be attributed to being started by the effect of Chinese immigrants. Out of all the immigrating ethnic groups, Chinese immigrants were the first to be banned because of their ethnicity (Alba and Nee 200). In 1882 Congress passed the Chinese Exclusion Act, which called for a ten year interdiction of Chinese immigrants (Dinnerstein and Reimers 58). Still these tactics could not halt immigration. There were exceptions which included teachers, diplomats, travelers, and merchants, and women and children were not specified in the ban leaving the decision up to the presiding officiator (Reimers 46). This only infuriated the masses even more and the Chinese began to be harassed and even burned out of their own homes (Dinnerstein and Reimers 58). The violence would not cease until 1892 when Chinese immigration was practically ended by further congressional legislation (Dinnerstein and Reimers). The Chinese Exclusion Act would finally be revoked in 1943 (Vellos), and it would not be until the passage of the Immigration Act of 1965 that mass immigration of Chinese immigrants would resume (Alba and Nee 202). However, hostility against the Chinese would continue into the twentieth century when white prejudices would then be projected unto the Japanese (Dinnerstein and Reimers 58-59).

The mass immigration of the Chinese to the United States had a profound effect. This mass immigration would lead to the beginnings of a “gate keeping” policy that is lingering even today (Lee). The prohibition of the Chinese had a domino effect resulting in excluding citizenship from “...Asian Indians in 1917, Japanese in 1924, and Filipinos in 1934” (Sanchez). One of the main reasons for race dividers between Americans is the perception of “foreignness” even when groups have been in the United States for generations (Sanchez). However, even with all of these efforts to suppress the flow, immigration would continue to flourish in the United States.

Hispanics

The ethnic label “Hispanic” first came into public usage during the 1970s; U.S. state agencies identified the ethnic label as the correct terminology to identify all people of Latin American and Spanish descent (Oboler 132). While there is much controversy surrounding the terms Hispanic and Latino concerning which is more politically correct, there has yet to be a general consensus even among Spanish-speakers. For this paper, the term Hispanic will be used to describe any persons of Spanish speaking descent as it, as stated by Gracia, “...is faithful to our historical reality, and leaves the doors open to development in many directions” (66).

Unlike the Chinese and Italians, Hispanics played a crucial role in American history. The Spanish were among the first to explore what is now known as the United States. Spanish conquistadores explored the New World during the 16th century in hopes of finding the legendary fountain of youth (Reimers 22). Expeditions were lead throughout the southwest and colonization took place (Reimers 23-26). However, the Spanish hold began to slip away in the 1800s, with the loss of Mexico. Shortly thereafter, strife would begin between the “Tejanos” (Mexicans living in Texas) and Anglos who had moved to Texas (Reimers 27). In 1829, the slaves in Texas were freed by Mexican authorities, much to the chagrin of its white settlers (Reimers 27). Strife would continue concerning both the slaves and the Catholic religion practiced by the Mexicans. The Texas Republic would later be developed by white settlers in response to the freeing of the slaves by the Mexican government (Reimers 27). The fact that Hispanic culture was once a major part of the United States has become an under analyzed topic in U.S. history (Sanchez). Even after its independence from Mexico, Texas still considered

Mexicans citizens (Reimers 27). The treaty of Guadalupe Hidalgo, which ended the Mexican-American War of 1846, instantly added about 60,000 Spanish-speaking citizens to the United States (Daniels 142).

A large amount of early Hispanic migrants can be attributed to the California Gold Rush. It is documented that a sum of 50,000 Latin Americans disembarked for the United States between 1848 and 1852 (Reimers 30). Chileans, Peruvians, and Mexicans all scrambled for the chance to “strike it rich” (Reimers 30-31). However, unlike the Italians and Chinese, Hispanic migration has not experienced waves of immigration. Rather, Hispanic migration can be viewed as “...hundreds, perhaps thousands, of chain migrations...” (Barone 158).

Hispanic immigration would continue following the Mexican Revolution in 1900 and World War I (Re Cruz 166). Socio-economic instability in Mexico and the need for cheap labor in the United States were all contributing factors to these migrations (Re Cruz 166). In an obvious attempt to control this continued growth, Congress passed the Immigration Act of 1917 which required all immigrants over the age of 17 to at least be able to read and write one language (World Book). The ploy would work and immigration would decline during the 1920s (World Book). However, with the passages of the Immigration Act of 1924, Mexican would once again flood America’s doors to fill the labor gap since the quota system did not apply to North or South America (Kowalski).

The Great Depression and World War II would bring about job shortages and Anglo-America would begin to direct its attention to the Hispanics (Kowalski). During the 1940s, Mexican migration would steadily increase (Daniels 180). Part of this reason was the Bracero Program (Vellos). The Bracero Program was implemented by both U.S. and Mexican governments in 1942 and ended in 1964 (Vellos). From 1954-1960, the Bracero Program would reach its pinnacle admitting approximately 300,000 labor workers yearly. In all, more than four million Mexicans were admitted into the United States during this period. In 1954, the United States government would authorize Operation Wetback (Kowalski). The Border Patrol was given complete control seeking and finding illegal immigrants for deportation (Kowalski). Although Operation Wetback was set up to find *all* illegal immigrants, mainly Mexicans would be targeted (Operation Wetback). People would even be stopped for being “Mexican-looking” (qtd. in Operation Wetback).

During the mid-1990s, Hispanic immigration grew with increased migration from Puerto Rico and Cuba (World Book). With this increase in immigration, grew increased fear in the hearts of Anglo-America. Not only was Hispanic naturalization growing, but so was its population. In 1986, under the Immigration Reform and Control Act (IRCA) a little over two million Mexican immigrants became legal immigrants and became eligible for naturalization in 1994 (Balistreri and Hook). According to Daniels, “By the middle 1990s public dissatisfaction with immigration probably reached a post-1924 peak” (Daniels 232). In fact, a California ballot would re-ignite a fervor that was present against the Italians and Chinese. Proposition 187, a short-lived ballot measure that banned illegal immigrants living in California from receiving public services including education and health benefits (Daniels 242-243) was backed by the Republicans; it was eventually declared unconstitutional by the courts (Barnes). However, the ban had a counter effect in that it provoked large numbers of Hispanics to become American citizens (Rodriguez 134-135).

With the push for legislating immigration restriction taking a turn for the worst, White America has found a newer way to deal with its increased Spanish-speaking population. Spear-headed by two groups, U.S. English and English First, the English-Only Movement is a huge

movement geared towards making English the official language of the United States (Hernandez). Already twenty-seven states have passed local legislation declaring English to be the official language of the United States (Rodriguez). Even schools are changing their policies concerning foreign languages. Drake University in Iowa has already deleted modern languages from its curriculum and left fifteen foreign language professors without a job (Buckley). Such actions are even more alarming when one realizes that on June 9, 2005 the U.S. Census Bureau released a press statement that the Hispanic population has passed the 40 million mark and is showing no signs of slowing down (US Census Bureau).

Conclusion

The anti-immigrant subculture developed by early English settlers is still thriving today. Clearly such sentiments are not expressed by all U.S. citizens. Nonetheless, it was only two years ago that an accompaniment to a previous bill reappeared that would have revoked the 14th Amendment allowing citizenship to anyone born within the United States (Jonas and Tactaquin). This subculture has created an ethnic hierarchy with Anglo-Americans fiercely clinging to the top and Hispanics constantly rounding out the bottom (Oboler 132). Currently, one out of nine people in the United States are immigrants (Jacoby 5).

So I now wish to answer my bank teller's question with a question of my own: When did being a certain ethnicity and knowing a certain language become the requirements to getting into the "land of opportunity?" The anti-immigrant sentiments against the Hispanics is the same as that directed toward the Italians, Chinese, and countless other immigrant groups that have threatened Anglo-America's livelihood. It is the same old wine, just in a new bottle.

Works Cited

- Aarim-Heriot, Najia. *Chinese Immigrants, African Americans, and Racial Anxiety in the United States, 1848-1882*. The Asian American Experience Urbana, University of Illinois Press, 2003.
- Alba, Richard and Victor Nee. *Remaking the American Mainstream: Assimilation and Contemporary Immigration*. Massachusetts: Harvard University Press, 2003.
- Anderson, Charles H. *White Protestant Americans: From National Origins to Religious Groups*. Ethnic Groups in American Life Series. Ed. Milton M. Gordon. Englewood Cliffs: Prentice-Hall, 1970.
- Balistreri, Kelly Stamper and Jennifer Hook. "The More Things Change the More They Stay the Same: Mexican Naturalization before and after Welfare Reform 1". *The International Migrant Review*. Spring 2004: 18 p. Research Library. ProQuest. Georgia Southern University Lib., Statesboro, GA. 28 June 2005 <<http://proquest.umi.com>>.
- Baltzell, E. Digby. *The Protestant Establishment: Aristocracy & Caste in America*. New York: Random House, 1964.
- Barnes, James A. "Are 'My Fellow Immigrants' Really Welcome". *National Journal*. Sep 2004: 3/4 p. Academic Search Premier. EBSCOhost. Georgia Southern University Lib., Statesboro, GA. 5 July 2005 <<http://web13.epnet.com>>.
- Barone, Michael. *The New Americans: How the Melting Pot Can Work Again*. Washington DC: Regnery, 2001.
- Buckley Jr., William F. "Xenophobia on the Wing?" *National Review*. May 2001: 2/3 p. MasterFILE Premier. EBSCOhost. Georgia Southern University Lib., Statesboro, GA. 5 July 2005 <<http://web13.epnet.com>>.

Daniels, Roger. *Guarding the Golden Door: American Immigration Policy and Immigrants Since 1882*. New York: Hill and Wang, 2004.

Dinnerstein, Leonard and David M. Reimers. *Ethnic Americans: A History of Immigration and Assimilation*. New York: New York University Press, 1975.

George, Alexander L. "Case Studies and Theory Development: The Method of Structural, Focused Comparison". In *Diplomacy: New Approaches in History, Theory, and Policy*. Ed. Paul Lauren. New York: Free Press, 1969. 43-68.

Gyory, Andrew. *Closing the Gate: Race, Politics, and the Chinese Exclusion Act*. Chapel Hill: The University of North Carolina Press, 1998.

Gracia, Jorge J. E. *Hispanic/Latino Identity: A Philosophical Perspective*. Malden: Blackwell, 2000.

Hernandez, Juan A. Avila. "English Only Proponents Push Legislation". *Tribal College*. Spring 2004: 13. Academic Search Premier. EBSCOhost. Georgia Southern University Lib., Statesboro, GA. 5 July 2005 <<http://web13.epnet.com>>.

Jacoby, Tamar. "Defining Assimilation for the 21st Century". Jacoby 3-16.

Jacoby, Tamar, Ed. *Reinventing the Melting Pot: The New Immigrants and What It Means to Be American*. New York: Basic Books, 2004.

Jonas, Susanne and Catherine Tactaquin. "Latino Immigrant Rights in the Shadow of the National Security State: Responses to Domestic Preemptive Strikes". *Social Justice*. 2004: 25p. Research Library. ProQuest. Georgia Southern Lib., Statesboro, GA. 16 June 2005< <http://proquest.umi.com>>.

Johnson, Paul. "God and the Americans." Editorial. Commentary. Jan 1995: 21p. Academic Search Premier. EBSCOhost. Georgia Southern University Lib., Statesboro, GA. 16 June

2005 <<http://web13.epnet.com>>.

Kowalski, Kathiann M. "Moving Northward in the 1900s". *Cobblestone* . May 2004: 10-15.

Research Library. ProQuest. Georgia Southern University Lib., Statesboro, GA. 28 June

2005 <<http://proquest.umi.com>>.

Langton, Edward. *The Fruits of Controversy*. London: Lutterworth, 1952.

Lee, Erika. "The Chinese Exclusion Example: Race, Immigration, and American Gatekeeping,

1882-1924." *Journal of American Ethnic History*. Summer 2002: 37-62. Academic

Search Premier. EBSCOhost. Georgia Southern University Lib., Statesboro, GA. 15 June

2005 <<http://web13.epnet.com>>.

Murdoch, Alexander. *British History 1660-1832: National Identity and Local Culture*. New

York: St. Martin's, 1998.

Ngai, Mae M. *Impossible Subjects: Illegal Aliens and the Making of Modern America*. New

Jersey: Princeton University Press, 2004.

Novak, Michael. *The Rise of the Unmeltable Ethnics: Politics and Culture in the Seventies*. New

York: Macmillan, 1972.

Rodriguez, Gregory. "Mexican-Americans and the Mestizo Melting Pot". *Jacoby* 125-138.

Oboler, Suzanne. *Ethnic Labels, Latino Lives: Identity and the Politics of (Re)Presentation in the*

United States. Minneapolis: University of Minnesota Press, 1995.

Oboler, Suzanne. "It Must Be A Fake!": Racial Ideologies, Identities, and the Question of

Rights". In *Hispanics/Latinos in the United States: Ethnicity, Race, and Rights*. Ed. Jorge

J.E. Gracia and Pablo De Greiff. New York: Routledge, 2000. 125-139.

Re Cruz, Alicia. *The Mexican-American Community in the United States*. In *Cultural Diversity*

in the United States. Ed. Larry L. Naylor. Westpoint: Bergin & Garvey, 1997. 159-175.

McNair Scholars Journal of Georgia Southern University, Vol. 6, 2005

Reimers, David M. *Other Immigrants: The Global Origins of the American People*. New York: New York University Press, 2005.

US Bureau of the Census. 2005. "Hispanic Population Passes 40 million, Census Bureau Reports". *U.S. Census Bureau News*. June 9, 2005.

Sanchez, George J. "Race, Nation, and Culture in Recent Immigration Studies". *Journal of American Ethnic History*. Summer 1999: 69-84. MasterFile Premier. EBSCOhost. Georgia Southern University Lib., Statesboro, GA. 15 June 2005 <<http://web13.epnet.com>>.

Tong, Benson. *The Chinese Americans*. The New Americans. Westport: Greenwood, 2000.

Van Vught, William E. *Britain to America*. Chicago: University of Illinois, 1999.

"The History of Chinese Immigration". *The Brown Quarterly*. 3.4 (2000) Retrieved 26 June. 2005. <<http://brownvboard.org/brwnqurt/03-4/03-4c.htm>>.

History Matters. Retrieved 26 June. 2005. <<http://historymatters.gmu.edu/d/5078>>.

GLUCOSE FERMENTATION PROFILES OF GEOGRAPHICALLY DIVERSE SPIROPLASMA BACTERIA

David Bostick, McNair Scholar

Laura B. Regassa, Research Mentor
Department of Biology

Abstract

Spiroplasmas may be one of the most abundant groups of microorganisms on earth. Traditional strain classification divided the spiroplasma into 34 groups based on serology. Recent phylogenetic reconstructions suggest a strong connection between phylogeny and the serological groups based on 16S rDNA analysis, but the study contained only 36 strains from North America and Europe. This research proposes to expand the current data set to include geographically diverse isolates from Australia, Costa Rica, Ecuador and the United States. The isolates were screened serologically, resulting in the identification of 25 independent serogroups. Twenty-one of these serogroups represent novel groups, and are likely to be new Spiroplasma species. This study focused on the glucose fermentation test. 17 of the 20 novel serogroup representatives fermented glucose. The strains that did not test positive exhibited growth inhibition and will be re-tested in an alternate glucose-containing media. These results represent the first step in obtaining species designations for these novel spiroplasma isolates.

Introduction

Spiroplasma (Procaryotae: Mollicutes: Entomoplasmatales: Spiroplasmataceae) are some of the smallest self-replicating procaryotes known, and are easily recognizable based on their helical morphology and motility (Carle et al. 1995). They have genomes ranging from 780-2220 kilobase pairs in size (Carle et al. 1995, Williamson et al. 1997), and although they lack a cell wall, these bacteria appear to have evolved from Gram positive bacteria (Woese et al. 1980, Weisburg et al. 1989). Over time spiroplasma began to colonize many habitats like the arthropod gut lumen, hemolymph, ovaries, fat bodies, hypodermis and salivary glands. These bacteria have been found to be associated with a variety of arthropods like Coleoptera, Diptera, Hymenoptera, Lepidoptera, Odonata, and Acari; and perhaps due to this close association with arthropods, spiroplasma are one the most abundant microorganisms on the planet (Bové 1997, Hackett and Clark 1989). To date, the most characterized and studied group of spiroplasma are from tabanid flies (Williamson et al. 1998).

Serology has been used to define groups and the species they morph into after characterization by a set of mandated taxonomic tests, because it has about the same resolving power as DNA-DNA hybridization (International Committee on Systematic Bacteriology (ICSB) 1995). DNA-DNA hybridization is the basis for the bacterial species concept, and the serological criteria have been "calibrated" against the standard technique of DNA-DNA reassociation (Johnson 1993, Wayne et al. 1987, Junca et al. 1980, Mouches et al. 1982). Initial designation of spiroplasma species had an accepted standard of 70% or greater DNA-DNA

homology, but some groups were identified with a lower homology percentage. This led to a suggestion of introducing subgroups to describe these related isolates (ICSB 1995). Currently, there are 34 recognized serological groups. Groups I (Bové et al. 1983), VIII (Gasparich et al. 1993), and XVI (Abalain-Colloc et al. 1993) are divided into eight, three and three subgroups, respectively, and each subgroup represents a species or putative species.

Naming a new species of spiroplasma requires that the organism be placed through a battery of tests before being recognized as such. The strains must be isolated and cultivated from the arthropod and then they must be cloned to make sure that the spiroplasma cultivated is the only microbe being investigated (ICSB 1995). The spiroplasma must then go through a deformation test, a metabolism inhibition test, biochemical assays (glucose and arginine), and G+C content analysis (ICSB 1995). The bacteria must also be viewed under an electron microscope to show that it has a single membrane and no cell wall. These guidelines are currently being revised, however, to include only 16S rDNA sequence, glucose fermentation, and arginine hydrolysis.

This study will focus on a geographically diverse collection of tabanid-associated spiroplasma. These bacteria were obtained from tabanid flies at seven locations in Australia, five in Costa Rica, one site in Ecuador, and three in the United States. A total of 217 individual isolates were screened serologically, resulting in the identification of 25 independent serogroups (Zarzuela et al. 2004). Twenty-one of these serogroups represent novel groups, and are likely to be new *Spiroplasma* species. Representatives from the novel serogroups are being subjected to 16S rDNA sequence analysis and tested for glucose fermentation and arginine hydrolysis to allow new species designations. This study focused on the glucose fermentation test.

Materials and Methods

Collection and isolation of spiroplasma. Spiroplasmas were isolated from female tabanids in Australia, Costa Rica, Ecuador, and the United States. The flies were captured and the spiroplasma isolated as described previously (Regassa et al. 2004). Briefly, the flies were captured using Gressitt/Mallaise traps or hand nets, chilled and their surface sterilized before the terminal abdominal segment was removed. The viscera were removed, cut up in 1.5 ml of medium and passed through a 0.45- μ m filter. This was incubated in M1D broth (Whitcomb 1983) at 30 °C and observed daily for growth. The cultures were viewed by dark-field microscopy and good cultures were stored at -70 °C.

Pure cultures were obtained using a dilution cloning technique as described previously (Regassa et al. 2004). The bacteria were diluted into a M1D broth which contained the pH indicator phenol red. The acidification of the sample is the indicator for growth of the spiroplasma, exhibited by a color change from red to yellow. The spiroplasmas that grew at the highest dilution were subcultured after verification under a dark-field microscope. This process was repeated three times and the samples frozen at -70 °C for storage.

Serology. The isolates were screened by spiroplasma deformation tests against 12 combinations of 34 antisera to tabanid-associated spiroplasma species (Whitcomb et al. 1999). Antisera were provided by Beltsville Agricultural Research Center (Beltsville, MD), the National Institute of Allergy and Infectious Diseases Laboratory (Frederick, MD), and our laboratory. Cultures were mixed with a combination of antisera, with each at a 1:20 dilution. This was then allowed to react for 30 minutes. Placement was based on at least 50% of the cells deforming in three independent trials.

Isolates that failed to cross-react with any of the antisera combinations were used for polyclonal antiserum production in rabbits using a standard protocol (Regassa et al. 2004). The spiroplasma and antisera produced were individually examined in reciprocal DF tests with tabanid-associated spiroplasma antigens or antibodies from characterized North American and French isolates (Whitcomb et al. 1999, Williamson et al. 1978), as well as from the novel serogroups identified in this study. Group placement was achieved by reciprocal deformation reactions at antisera dilutions $\geq 1:320$.

Sugar Fermentation. Sugar fermentation tests were conducted as previously described by Razin and Cirillo (1983). The medium for the test was heart infusion broth containing 10% inactivated horse serum and 0.005% phenol red, with an adjusted pH of 7.6. Glucose (1% wt/vol) was added to the test media while the control media contained no glucose. The media were sterilized by filtration. To obtain an actively growing spiroplasma culture that was adapted to the test media, 1-ml of glucose-containing test medium was distributed into 3-ml culture tubes, and 20 μ l of frozen spiroplasma stock culture was added. These tubes were then incubated at 30 °C until the media exhibited a color change, from red to yellow, due to a decrease in pH as a result of glucose fermentation. After the color change, the sample was checked under a dark field microscope to verify spiroplasma growth.

The actively growing spiroplasma cultures were then tested for growth at a 1:1000 dilution with glucose-containing and non-glucose-containing media (5 μ l culture into 5 ml medium). The tubes were incubated at 30 °C and checked at 24-hour intervals for a color change from red to yellow. Cultures that turned yellow were inspected under a dark field microscope to verify spiroplasma growth, and after verification the cultures were tested for terminal pH using a pH meter.

Results

Serological Analyses. The serological analyses of the novel spiroplasma isolates resulted in the identification of 25 independent serogroups (Table 1 modified from Zarzuela et al 2004). For the Australia isolates, one serogroup, represented by GSU5603, contained 21 isolates. The other 22 isolates could be placed in the serogroups represented by GSU5510, GSU5478 and GSU5508. Three serogroups found in Costa Rica were closely related to isolates from the United States; *S. helicoids* (8 isolates), *S. litorale* (7 isolates) and *S. lineolae* (6 isolates). Three additional isolates were related to another U.S.A. tabanid-associated isolate, BARC 4689. The remaining 33 isolates were unique to Costa Rica and were grouped into 11 serogroups. From Ecuador eight isolates were serotyped, with three being placed into the serogroup GSU5862 and the remaining five distributed in four other serogroups.

Glucose Fermentation. A glucose fermentation assay was performed on representatives of the 25 serogroups to determine if they utilized glucose for metabolic needs. Utilization of glucose as a food source was established by acid production of the bacteria in the test media. The change from a slightly basic solution (pH 7.6) to an acidic solution (pH < 6.5) was determined by a change from a red color to a yellow color. Of the 27 strains tested, 21 were positive for fermentation of glucose (including three positive controls), and 6 were undetermined due to lack of growth in the test media or non-inclusion in the assay (Table 2).

Discussion

The serological analysis shows that there are four common serogroups found in the United States and Costa Rica, but the strains from Australia and Ecuador are unique to their particular regions. Thus, biodiversity appears to play a role in serogroup distribution, but these relationships need to be verified by DNA sequence analysis. Given the correlation observed by Gasparich et al. (2004) between phylogenetic relationships and serology, these biogeographical relationships may be maintained in the phylogenetic analyses.

To name new species, the proposed standards require 16S rDNA sequence analysis, glucose fermentation and arginine hydrolysis assays. These abbreviated criteria are currently under review by the International Organization of Mycoplasmology. The focus of this study was the glucose fermentation assay. Of the isolates tested, 21 were positive for glucose fermentation (Table 2). The three positive control strains (*S. litorale*, *S. lineolae*, and *S. helicoids*) also fermented glucose as expected (Williamson et al. 1998). Three of the strains tested would not grow in the medium; this is likely due to the inclusion of horse serum. To alleviate this problem a change will be made from horse serum to fetal bovine serum, and the strains will be re-tested.

To date very little is known about the biodiversity of spiroplasma bacteria. Only eight tabanid-associated spiroplasma from the United States and France have been classified and this study will help to expand the current data set to include a large number of new tabanid-associated spiroplasmas. Phylogenetic analyses of the four previously characterized strains along with the new putative species will provide a more complete picture of spiroplasma diversity.

Acknowledgements

We thank Manuel Zumbado (Instituto Nacional de Biodiversidad, Costa Rica) and Greg Daniels (University of Queensland, Australia) for their vital assistance in location sites to capture the tabanid hosts. Jimmy Wedincamp, Jr., East Georgia College, Swainsboro, Georgia, provided the isolates from Ecuador. This work was supported by the National Geographical Society (#6183-98), the United States Department of Agriculture (#98-35204-7019), the National Science Foundation (DEB-0481430), the Ronald E. McNair Post-Baccalaureate Achievement Program, and the Georgia Southern University of Office of Graduate Research and Faculty Research Committee.

Table 1. Long form *Spiroplasma* from *Tabanidae* Diptera of Australia, Costa Rica, Ecuador and U.S.A.

Serogroup Representative	Number of serologically similar isolates per country	Host of serogroup representative	Locality of serogroup representative host ¹
Australia			
GSU5603	21	<i>Scaptia lasiophthalma</i>	Batemans Bay, NSW
GSU5510	11	<i>Tabanus townsvilli</i>	Karyina Station, QLD
GSU5478	6	<i>Tabanus pallipenis</i>	Eungella, QLD
GSU5508	5	<i>Tabanus particaecus</i>	Karyina Station, QLD
Costa Rica			
GSU5441 (<i>S. helicoides</i>)	8	<i>Tabanus abactor</i>	Oklahoma, U.S.A.
GSU5353 (<i>S. litorale</i>)	7	<i>Tabanus nigrovittatus</i>	North Carolina, U.S.A.
GSU5358 (<i>S. lineolae</i>)	6	<i>Tabanus lineola</i>	Georgia, U.S.A.
BARC 4689	3	<i>Tabanus lineola</i>	Georgia, U.S.A.
BARC 4906	4	<i>Poeciloderas quadripunctatus</i>	Sto. Dominigo, Heredia Prov
BARC 4900	2	<i>Poeciloderas quadripunctatus</i>	Sto. Dominigo, Heredia Prov
BARC 4886	1	<i>Poeciloderas quadripunctatus</i>	San Gerardo de Dota, San José Prov.
GSU5450	2	<i>Poeciloderas quadripunctatus</i>	Sto. Dominigo, Heredia Prov.
GSU5382	8	<i>Tabanus punctipleura</i>	Pto Vargas N.P., Lemon Prov.
GSU5360	4	<i>Dichelacera princessa</i>	Pto Vargas N.P., Lemon Prov.
GSU5373	3	<i>Tabanus occidentalis</i>	Pto Vargas N.P., Lemon Prov.
GSU5443	3	<i>Tabanus oculus</i>	Curu, Puntarenas Prov.
GSU5446H	3	<i>Tabanus nebulosus</i>	Curu, Puntarenas Prov.
GSU5366	2	<i>Tabanus secundus</i>	Pto Vargas N.P. Lemon Prov.
GSU5405	1	<i>Tabanus occidentalis</i>	Hiltoy Cerere, Lemon Prov.
Ecuador			
GSU5862	3	<i>Tabanus occidentalis</i>	Tiputini Bio. Sta., Napo Prov
GSU5867	2	<i>Tabanus occidentalis</i>	Tiputini Bio. Sta., Napo Prov
GSU5865	1	<i>Tabanus occidentalis</i>	Tiputini Bio. Sta., Napo Prov
GSU5858	1	<i>Phaeotabanus nigriflavus</i>	Tiputini Bio. Sta., Napo Prov.
GSU5853	1	<i>Phaeotabanus prasiniventris</i>	Tiputini Bio. Sta., Napo Prov.
U.S.A.			
TAUS-1 (<i>S. tabanidicola</i>)	93	<i>Tabanus sp.</i>	Prince Georges Co., Maryland
BARC 4689	4	<i>Tabanus lineola</i>	Bulloch Co., Georgia
GSU4980	3	<i>Tabanus lineola</i>	Evangeline Parrish, LA
TALS-2 (<i>S. lineolae</i>)	11	<i>Tabanus lineola</i>	Bulloch Co., Georgia

¹Specific locale information follows: Batemans Bay, NSW, Australia, 5 km N in Benandarah St. Forest, S35°40.25'E150°12.84'; Curu, Refruge Nac. de Vida Silvestre, Puntarenas Prov., Costa Rica N9°48.17'W84°55.52' ele 35m; Eungella, QLD, Australia, Frank Kerr Dairy, S21°10.04'E148°30.41'; Heredia Prov., Costa Rica, INBio garden, N9°58.5'W84°5.5', Sto. Domingo; Hiltoy Cerere Bio.Sta. Lemon Prov., Costa Rica, N09°40.37'W83°01.44, ele.100m; Karyina Station, QLD, Australia, S. adjacent to Isla George Natl.Park, S25°13.19'E149°57.84'; Pto.Vargas Nat. Pk., Lemon Prov.,Costa Rica, N09°42.930'W82°49.269, ele. 2m; San Gerardo de Dota on Rio Savegre N9°33.20'W83°48.38', ele. 2000m; Tiputini Biodiversity Station, Napo Providence, Ecuador 0°38.3'S,76°8.9'W, ele. 220m.

Table 2. Glucose fermentation assay.

Strain	Glucose fermentation ¹	Terminal pH ²
Australia		
GSU5603	+	4.73/4.78
GSU5510	+	5.21/5.41
GSU5478	+	5.84/5.03
GSU5508	+	4.71/5.31
Costa Rica		
GSU5441 (<i>S. helicoides</i>) ³	+	5.95/6.43
GSU5353 (<i>S. litorale</i>) ³	+	4.57/5.08
GSU5358 (<i>S. lineolae</i>) ³	+	4.57/5.08
BARC 4689	NT ⁴	-
BARC 4906	+	5.27/5.10
BARC 4900	+	6.45/5.96
BARC 4886	NT ⁴	-
GSU5450	+	4.74/4.74
GSU5382	+	4.81/4.80
GSU5360	+	5.09/5.04
GSU5373	ND ⁵	-
GSU5443	+	5.43/5.48
GSU5446H	+	4.82/5.14
GSU5366	+	4.56/4.50
GSU5405	ND ⁵	-
Ecuador		
GSU5862	+	5.70/5.75
GSU5867	ND ⁵	-
GSU5865	+	6.36/6.45
GSU5858	+	4.77/4.78
GSU5853	+	5.05/4.53
U.S.A.		
TAUS-1(<i>S. tabanidicola</i>) ³	NT ⁴	-
BARC 4689	NT ⁴	-
GSU4980	+	5.32/5.36
TALS-2 (<i>S. lineolae</i>) ³	+	4.57/5.08

¹ A positive test result (+) was determined based on the media color change resulting from decreased pH.

² Terminal pH values were determined after 2-11 days of incubation. Results for duplicate cultures shown.

³These isolates have been given species designations; glucose fermentation results have been published previously.

⁴ND; not done due to poor growth in test media.

⁵NT; not tested.

References

- Abalain-Colloc, M., Williamson, D.L., Carle, P., Abalain, J.H., Bonnet, F., Tully, J.G., Konai, M., Whitcomb, R.F., Bové, J.M., and Chastel, C. 1993. Division of group XVI spiroplasmas into subgroups Int. J. Syst. Bacteriol. 43: 342-346.
- Bové, J.M., Mouches, C., Carle-Junca, P., Degorce-Dumas, J.R., Tully, J.G., and Whitcomb, R.F. 1983. Spiroplasmas of Groups I: The *Spiroplasm citri* cluster. Yale J. Biol. Med. 56: 573-582.
- Bové, J.M. 1997. Spiroplasmas: infectious agents of plants, arthropods, and vertebrates. Wien. Klin. Wochenschr. 109: 604-612.
- Carle, P., Laigret, F., Tully, J.G., and Bové, J.M. 1995. Heterogeneity of genome sizes within the genus *Spiroplasma*. Int. J. Syst. Bacteriol. 45: 178-181.
- Gasparich, G.E., Saillard, C., Clark, E.A., Konai, M., French, F.E., Tully, J.G., Hackett, K.J., and Whitcomb, R.F. 1993. Serologic and genomic relatedness of group VIII and group XVII spiroplasmas and subdivision of spiroplasma group VIII into subgroups. Int. J. Syst. Bacteriol. 43: 338-341.
- Gasparich, G.E., Whitcomb, R.F., Dodge, D., French, F.E., Glass, J., and Williamson, D.L. 2004. The genus *Spiroplasma* and its non-helical descendants: phylogenetic classification,

correlation with phenotype and roots of the *Mycoplasma mycoides* clade. *Int. J. Syst. Evol. Microbiol.* 54: 893-918.

Hackett, K.J., and Clark, T.B. 1989. Ecology of spiroplasma. *In* *The Mycoplasmas*. Vol. 5.

Edited by R.F. Whitcomb and J.G. Tully. Academic Press, San Diego, Calif. pp. 113-200.

International Committee on Systematic Bacteriology. Subcommittee on the Taxonomy of

Mollicutes. 1995. Revised minimal standards for descriptions of new species of the class *Mollicutes* (Division *Tenericutes*). *Int. J. Syst. Bacteriol.* 45: 605-612.

Johnson, J.L. 1993. Similarity analysis of DNAs. *In* *Methods for general and molecular*

bacteriology. Edited by P. Gerhardt (Editor in Chief). ASM Press, Washington, D.C. pp. 656-682.

Razin, S. and Cirillo V.P. 1983. Sugar Fermentation. *Methods Mycoplasmaology*. 1: 337-343.

Regassa, L.B., Stewart, K.M., Murphy, A.C., French, F.E., Lin, and T., Whitcomb, R.F. 2004.

Differentiation of group VIII *Spiroplasma* strains with sequences of the 16S-23S rDNA intergenic spacer region. *Can. J. Microbiol.* 50: 1061-1067.

Wayne, L.G., Brenner, D.J., Colwell, R.R., Grimont, P.A.D., Kandler, P., Krichevsky, M.I.,

Moore, L.H., Moore, W.E.C., Murray, R.G.E., Stachebrandt, E., Starr, M.P., and Trüper,

- H.G. 1987. Report of the *ad hoc* committee on reconciliation of approaches to bacterial systematics. *Int. J. Syst. Bacteriol.* 37: 463-464.
- Weisburg, W.G., Tully, J.G., Rose, D.L., Petzel, J.P., Oyaizu, H., Yang, D., Mandelco, L., Sechrest, J., Lawrence, T.G., Van Etten, J., Maniloff, J., and Woese, C.R. 1989. A phylogenetic analysis of the mycoplasmas: basis for their classification. *J. Bacteriol.* 171: 6455-6467.
- Whitcomb, R.F. 1983. Culture media for spiroplasmas. *In* *Methods in Mycoplasmaology*. Vol. 1. Edited by S. Razin and J.G. Tully. Academic Press, N.Y. pp. 147-158.
- Whitcomb, R.F., Williamson, D.L., Gasparich, G.E., Tully, J.G. and French, F.E. 1999. *Spiroplasma* taxonomy. First Internet Conference on Phytopathogenic Mollicutes. Available from <http://www.uniud.it/phytoplasma/conf.html> [accessed on 15 June 2005].
- Williamson, D.L., Whitcomb, R.F., and Tully, J.G. 1978. The Spiroplasma deformation test, a new serological method. *Curr. Microbiol.* 1:203-207.
- Williamson, D.L., Adams, J.R., Whitcomb, R.F., Tully, J.G., Carle, P., Konai, M., Bové, J.M., and Henegar, R.B. 1997. *Spiroplasma platyhelix* sp. nov., a new mollicute with unusual morphology and genome size from the dragonfly *Pachydiplax longipennis*. *Int. J. Bacteriol.* 47: 763-766.

Williamson, D.L., Whitcomb, R.F., Tully, J.G., Gasparich, G.E., Rose, D.L., Carle, P., Bové, J.M., Hackett, K.J., Adams, J.R., Henegar, R.B., Konai, M., Chastel, C., and French, F.E. 1998. Revised groups classification of the genus *Spiroplasma*. *Int. J. Bacteriol.* 48: 1-12.

Woese, C.R., Maniloff, J., and Zablen, L.B. 1980. Phylogenetic analysis of the mycoplasmas. *PNAS USA*, 77: 494-498.

Zarzulea, A.B., French, F.E., Wedincamp, J.J., Whitcomb, R.F., and Williamson, D.L. 2004. Apis Group Spiroplasmas from Horse Flies of Australia, Costa Rica, and Ecuador. *Abstr. 15th Congress IOM*, p. 132.

AN ANALYSIS OF THE RELATION BETWEEN HIGH DISCRETIONARY QUARTERLY REVENUE ACCRUALS AND FRAUDULENT EARNINGS MANAGEMENT ENFORCEMENT ACTIONS TAKEN BY THE SEC

Korey S. Castleberry, McNair Scholar
Department of Finance and Quantitative Analysis

Dr. Timothy Cairney, Research Mentor

Abstract

This study examines publicly traded companies and their historical financial statements in an attempt to establish a relation between the accrual level and involvement of earnings management within publicly traded corporations. Generally accepted accounting principles allow managers to use discretion and flexibility in reporting and disclosing their companies' financial information, which allows the practice of earnings management. Because of this flexibility that GAAP allows, a gray area has emerged finding it hard to decipher a difference between good revenue management and fraud. A close look is taken to determine if a relationship between high quarterly discretionary accruals and fraudulently managed earnings exists. Quarterly discretionary accruals are measured using the Modified Jones Model, a method used to detect nondiscretionary accruals that takes into account the size and growth of the particular company in question, producing more accurate results. Accounting and Auditing Enforcement Releases (AAERs), publications released by the Securities and Exchange Committee, will be used to identify companies with fraudulently managed earnings. AAERs contain the details of major enforcement actions taken by the SEC against companies that violate financial reporting standards. The research indicates that companies with fraudulently managed earnings may be preceded by high levels of discretionary revenue accruals.

Introduction

Generally Accepted Accounting Principles (GAAP) are the common guidelines that companies follow in order to present financial information so that investors can compare one company to another. Because financial conditions of companies are complex, GAAP allow managers to use discretion and flexibility in reporting and disclosing their companies' financial information. At the same time, corporate performance measured by GAAP is the basis for executive compensation. Thus, executives have incentives to bias their discretion toward overestimating their performance. Because of the flexibility that GAAP allows, a gray area has emerged finding it hard to decipher a difference between good revenue reporting and fraud.

Review of Literature and Hypothesis Development

Over the last few years, many cases have come forth to the public eye about the abuse of this gray area called earnings management. According to Magrath and Weld (2002), the Enron scandal triggered a massive investigation on then current abuses of earnings management in 2000. For instance, Lucent Technologies, Cendant, and MicroStrategy also had their accounting reports scrutinized. Because of companies' abuses of financial statement reporting, the discretion and flexibility in reporting and disclosing companies' financial information has been associated with financial fraud. Discretionary reporting has grown from earnings management schemes to manipulate financial numbers to meet analysts' expectations to blatantly fraudulent corporate reporting.

Financial literature offers different interpretations of management discretion in reporting earnings. It is the ability of managers to use discretion and flexibility when reporting income that is referred to as earnings management. Arya and Sunder (2003) supports the notion that earnings management can be beneficial to shareholders. They describe communication, commitment, and contract as the necessary "three C's" that influence acceptable earnings management.

- Communication

GAAP only allow that *total* revenues and expenses be reported, so companies do not disclose transitory changes in income. Thus, because management cannot separately disclose transitory and permanent changes in income, then earnings management, within reasonable limits, provides a method to communicate top management's future expectations of their company's financial performance and promote efficient decisions. In this case, earnings management is not only tolerated, but encouraged by shareholders for their own good.

- Commitment

A breakdown in commitment also warrants earnings management. Because company managers are evaluated on a short term basis (annually and quarterly) they should be allowed to manage earnings. The company's owners (the board of directors and shareholders) will intervene early if the financial reports do not meet their expectations. The owner or board of directors may begin to participate more in activities normally left up to the managers. Earnings management is necessary to prevent these owners from intervening too early.

- Contract

A breakdown in contract also warrants earnings management. Economic transactions can be very complex, and all transactions cannot be represented by GAAP. Earnings management allows managers to use their own discretion to best report certain transactions not fully described by GAAP.

Giroux (2004) offers a broader, more neutral definition. He defines earnings management as a four-phase spectrum ranging from conservative and moderate

Castleberry: Relation between Revenue Accruals

accounting at one end to aggressive accounting followed by fraud at the other end. Earnings management shifts to overly aggressive, fraudulent accounting when financial information is deliberately misstated. Companies may engage in income smoothing, a tactic used to “generate consistent revenue and earnings growth rather than erratic changes”, or they may be blatantly dishonest in their financial reporting.

Just as some literature provides a positive view of earning management, there are others that believe earnings management has negative consequences. Earnings management occurs when “managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Giroux, pg 20).

There are some warning signs that abusive earnings management may be taking place. Some of these warnings signs include: cash flows that are not correlated with earnings, receivables not correlated with revenues, allowances for uncollectible accounts not correlated with balance sheet items, and questionable acquisition reserves. Dechow and Skinner (2000) state that “as a result of the accruals process, reported earnings tend to be smoother than underlying cash flows” (237), therefore to get a more accurate view of the underlying economic performance of company, accruals must be examined. Beneish’s (2001) studies support this notion. He reports that earnings management is more likely to occur on the accrual component of earnings.

To further understand this, we must look briefly at revenue accruals. When a company earns revenue, the customer pays cash or sets up an accrual called accounts receivable (A/R). An accounts receivable is essentially a promise to pay later for services performed today. Thus, revenues are reflected as either cash or accounts receivable. Accounts receivable accruals consist of two components: discretionary and nondiscretionary, or normal accruals. According to Chan, Jegadesesh, and Sougiannis (2004), nondiscretionary accruals reflect business conditions and are not related to earnings management. Therefore, a certain amount of accounts receivable are normal.

Vinciguerra (2004) suggests that firms often use accruals to improve the reporting of operating results of a company. Most of the existing studies focus on annual discretionary accruals; these accruals represent the discretion managers have on reported earnings. However, Magrath and Weld, and Tunick point out that quarterly revenue pressures “may be the primary catalyst in leading managers to engage in earnings management that result in questionable or fraudulent revenue recognition practices” (Magrath, 53). Because of these authors findings that quarterly revenues are a driving force behind earnings management, this study focuses on discretionary quarterly revenue accruals.

Hypothesis

Essential to this study are the Accounting and Auditing Enforcement Releases (AAERs) released by the Securities and Exchange Commission. The SEC issues AAERs after a company is proven to fraudulently managed earnings. This study examines if companies that were proven to be fraudulent also exhibit excessive discretionary quarterly revenue accruals (DQRA). Professional literature portrays quarterly revenue pressures as a leading cause of earnings management. Thus, it is hypothesized that high

levels of discretionary quarterly revenue accruals are representative of fraudulent earnings management.

Hypothesis:

There is a positive relationship between high discretionary quarterly revenue accruals and fraudulent earnings management enforcement actions taken by the SEC within publicly traded companies.

Methodology

This analysis attempts to identify a relationship between discretionary quarterly revenue accruals and fraudulent earnings management. To do this, a sample of companies that fraudulently manage earnings must be examined. These companies are identified using AAERs provided by the SEC. Due to the exploitation of Generally Accepted Accounting Principles, the SEC has begun to closely watch for warning signs of fraudulent activity. The SEC takes legal enforcement action against companies alleged to have violated financial reporting laws. These enforcement actions against suspected fraudulent corporations have been published in a series of AAERs since 1982.

After identifying 40 companies that the SEC reported as committing fraud between the years of 1993-2003 (see table 1), the quarterly accounts receivable, quarterly revenue, quarterly cash, and quarterly total assets were retrieved from the COMPUSTAT database for all fiscal quarters of the given years. Also, the Standard Industry Classification (SIC) number which identifies the industry in which the fraudulent company is a member was retrieved.

Table 1

Some AAERs retrieved from SEC website,
<http://www.sec.gov/divisions/enforce/friactions.shtml>.

Company Name	AAER Release # & Date	Fraud Fiscal Year	Explanation
Akorn, Inc.	1921 / December 11, 2003	2000	Akorn failed to promptly and completely record and reconcile cash and credit remittances, including from its top five customers, to invoices posted in its accounts receivable sub-ledger
American Banknote Corporation	2094 / September 8, 2004	1996	Overstated ABN's fiscal year 1996 revenue and net income
American International Group (AIG)	2145 / November 30, 2004	March 2001- Jan. 2002	Violated antifraud provisions of the federal securities laws
American Tissue, Inc.	1735 / March 10, 2003	2000-01	Fraudulently and materially inflated revenues and earnings in periodic reports
Anicom, Inc.	1741 / March 17, 2003	1999	Improperly recognized more than \$10.454 million in sales to a fictitious customer
Aurora Foods, Inc.	2222 / April 4, 2005	1998-1999	Aurora under-reported its trade marketing expenses by more than \$43 million; resulted in material misstatements of earnings in financial statements

Castleberry: Relation between Revenue Accruals

Bristol-Myers Squibb Company	2075 / August 4, 2004	2000-01	Engaged in a fraudulent scheme to overstate its sales and earnings in order to create the false appearance that the Company had met or exceeded financial projections.
BroadVision, Inc.	2162 / January 6, 2005	2001	Improperly recognized \$3.75 million of software license revenue during September 2001
Candie's, Inc.	1770 / April 30, 2003	1998-99	Prematurely recognized revenue and artificially inflated revenue.
Chancellor Corporation/ (Davis & Metcalf)	2229 / April 11, 2005	1998, 1999	Materially overstated its revenue, income and assets for 1998 in its Form 10-KSB.
Computer Associates International, Inc.	2106 / September 22, 2004	1998-2000	Computer Associates routinely kept its books open to record revenue from contracts executed after the quarter ended in order to meet Wall Street quarterly earnings estimates.
Cumulus Media Inc.	1922 / December 12, 2003	1999	Prematurely recorded revenue from advertising contract packages.
Cutter & Buck Inc.	2154 / December 17, 2004	Year Ended April 30, 2000	Falsely announced revenue of \$152.5 million & overstated Cutter's true annual revenue by 4%.
Daisytek International	2172 / January 24, 2005	2001-03	Daisytek improperly managed its earnings during its fiscal years ended in 2001, 2002, and 2003
Del Global Technologies Corp., Inc.	2027 / June 1, 2004	1997-99	Routinely engaged in improper revenue recognition when it held open quarters, and recorded sales on products that Del had not yet manufactured
Dollar General	2225 / April 7, 2005	1997-2000	Failed to properly or timely reconcile its consolidated retail store bank accounts to its general ledger.
Easylink Services	2227 / April 7, 2005	2000	EasyLink improperly recognized and reported advertising revenue from barter transactions.
eFunds Corporation	2139 / November 19, 2004	2 nd qtr 2001	eFunds improperly recognized \$2.1 million in revenue from a transaction with Access Cash, an affiliated entity. eFunds' improper revenue recognition overstated net income by 11.5 percent.
Elan Corporation, plc	2181 / February 8, 2005	2000-2001	Materially misleading financial statements led investors to believe that Elan had achieved record results through improvements in the company's business, when in fact it had not
Electro Scientific Industries, Inc.	2109 / September 24, 2004	2002	Reported a false profit rather than a loss for August 31, 2002.
Fischer Imaging Corporation	2134 / November 15, 2004	2000-2002	Fischer materially misstated figures reported for its revenue, inventory, net income, and gross profit in its financial statements.

McNair Scholars Journal of Georgia Southern University, Vol. 6, 2005

GE InVision, Inc. (formerly known as InVision Technologies, Inc.)	2187 / February 14, 2005	June 2002-2004	Authorized improper payments to foreign government officials in violation of the Foreign Corrupt Practices Act (FCPA).
Gemstar-TV Guide International, Inc	2125 / October 20, 2004	2000	Improperly reported revenue consisted of approximately \$152 million in licensing revenue and approximately \$60 million in advertising revenue.
Global Crossing Ltd.	2231 / April 11, 2005	2001	Failure to ensure that the company provided complete and accurate disclosure to investors concerning certain significant transactions entered into by the company in the first half of 2001.
Halliburton Company	2072 / August 3, 2004	1997-98	The company's change in its claims recognition practice resulted in a material increase in Halliburton's publicly disclosed income.
Hanover Compressor Company	No. 1928 / December 18, 2003	2000-01	Overstatement of Hanover's pre-tax income during 2000-01
Humatech, Inc.	2193 / March 1, 2005	2000	Improperly recorded two sales totaling \$297,640 (improper revenue recognition)
i2 Technologies, Inc.	2033 / June 9, 2004	2002	i2 misstated approximately \$1 billion of software license revenues.
Just For Feet	2238/ April 26, 2005	1998	Falsified financial statements by (1) improperly recognizing unearned and fictitious receivables and revenue from its vendors, (2) failing to properly account for and to disclose problems with obsolete inventory, and (3) improperly recording as income the value of display booths provided by its vendors.
Master Graphics, Inc.	2028 / June 2, 2004	1999	Fraudulently overstated the company's net income to meet analysts' expectations
Measurement Specialties, Inc.	2050 / July 8, 2004	2001	Materially overstated its earnings in its financial reports in a manner inconsistent with generally accepted accounting principles
Monsanto Company	2160 / January 6, 2005	2001	Illegal payments to a senior Indonesian Govt officials
Morgan Stanley	2132 / November 4, 2004	2001-03	Violated financial reporting, recordkeeping, and internal controls provisions of the federal securities laws
Motorcar Parts and Accessories, Inc.	1925 / December 18, 2003	1997	Inflation of Motorcar's revenues and profitability by falsely reporting as revenues sales that in fact were shipped after year-end
Nesco, Inc.	1933 / December 22, 2003	2000	Inflated assets and revenue for its fiscal year 2000 and first quarter 2001 by over \$2 million
Network Associates, Inc.	2036 / June 16, 2004	1998-2000	Improper recognition of hundreds of millions of dollars of revenue

Castleberry: Relation between Revenue Accruals

NextCard, Inc.	2112 / September 28, 2004	2000	NextCard's senior officers made a series of undisclosed, after-the-quarter accounting adjustments on NextCard's books.
Nicor Energy LLC	1923 / December 12, 2003	2001	Improperly inflated Nicor Energy's net income by over \$11 million
Penthouse International, Inc.	2173 / January 24, 2005	Quarter ended March 31, 2003	Misleading quarterly statement; improperly included as revenue on the financial statements for that quarter \$1 million received as an up-front payment in connection with a five-year website management agreement
Piranha, Inc.	2084/ August 23, 2004	during 2000 and 2001,	Piranha failed to disclose and wrongly accounted for \$675,000 allegedly misappropriated from the company
PurchasePro.com, Inc (now Pro-After Inc.)	2152 / December 15, 2004	2001	Artificially inflated the first quarter 2001 ("Q1 2001") revenue
Qwest Communications, International, Inc.	2127 / October 21, 2004	1999-2002	Qwest fraudulently recognized over \$3.8 billion in revenue and excluded \$231 million in expenses as part of a fraudulent scheme to meet revenue and earnings projections
Robotic Vision Systems, Inc.	2137 / November 19, 2004	2000	Material overstatements of revenue and income by Robotic in two public filings with the Commission in 2000
Robotic Vision Systems, Inc.	2157 / December 27,, 2004	1999-2000	Made material overstatements of revenue and net income resulting from improper recognition of revenue
Scientific Software-Intercomp, Inc. (SSI)	2163 / January 7, 2005	1993-94	Materially overstated its revenue and earnings by backdating or misdating contracts, booking revenue without contracts, overaccruing project revenues and providing confidential side letters modifying payment obligations
Solucorp Industries Ltd.	1849 /August 25, 2003	1995-99	Improperly recognized as revenue license fees that were subject to material contingencies.
Structural Dynamics Research Corporation	2071 / August 3, 2004	1992-94	SDRC inflated revenue and earnings by recognizing both premature and fictitious revenue
Styling Technology Corporation	1919 / December 3, 2003	1997	Recorded false revenue from certain sales transactions.
Symbol Technologies, Inc.	2029 / June 3, 2004	1998-2003	Symbol engaged in numerous fraudulent accounting practices and other misconduct that had a cumulative net impact of over \$230 million on Symbol's reported revenue and over \$530 million on its pre-tax earnings.
Talx Corporation	2202 / March 4, 2005	2001	TALX used a fraudulent bill and hold transaction to inflate income.
Team Communications Group, Inc.	2224 / April 6, 2005	1999, 1 st 3 qtrs 2000	Materially misstated figures reported for its revenue, operating income and net income in its financial statements.

The North Face, Inc.	1751 / April 4, 2003	1997	Filed materially false and misleading financial statements in the company's annual report on Form 10-K.
Time Warner, Inc.	2216 / March 21, 2005	2000-2002	Materially overstated online advertising revenue and the number of its Internet subscribers, and aiding and abetting three other securities frauds
Unison HealthCare Corporation	2233 / April 19, 2005	3 rd qtr. 1996.	Made unsupported journal entries to the corporate accounting records that materially inflated Unison's net income.
Vivendi Universal, S.A.	1935 / December 24, 2003	2001	Made improper adjustments that raised Vivendi's EBITDA.
Waste Management, Inc.	2116 / September 30, 2004	1992-97	Engaged in a systematic scheme to falsify and misrepresent Waste Management's financial results with profits being overstated by \$1.7 billion
Xerox	2234/ April 19, 2005	1997-2000	Engaged in a fraudulent scheme that disguised Xerox's true operating performance

Following this, non-fraudulent, public companies were identified from the same industries as fraud companies using the SIC number. Non-fraud companies were chosen from same industries as fraud companies in the sample using Standard Industry Classification (SIC) number. Quarterly accounts receivable, quarterly revenue, quarterly cash, and quarterly total assets for these non-fraud companies were retrieved for the fiscal quarters of 1993-2003 from the COMPUSTAT database.

The hypothesis predicts that these fraudulent companies will have high discretionary quarterly revenue accruals. Next, the calculation of excessive quarterly revenue accruals will be described.

First, GAAP allow for discretionary revenue accruals. In order for managers to properly report when revenues occur, the service or sale must have been substantially completed. For instance, say Dell Computers has a multi-million dollar order of special computers from a client. Most would agree that revenue is certainly earned when the last computer is shipped; however, what if Dell Computers manufactured all of the computers and packaged them, but the customer asked Dell to hold the computers for another two months? Because Dell has signed a contract, has Dell earned revenue as of now? This describes the gray area of discretionary accruals. Too liberal a revenue recognition policy would result in excessive discretionary revenue accruals. Because a company's policy of recognizing revenue is not observable, the excessive discretionary accruals must be estimated.

There are several methods used to estimate discretionary accruals. Dechow et al. (1995) identify five models. They include the Healy Model which compares the average total accruals over several years. If the current accruals are greater than the past average, then this would indicate excessive discretionary accruals. Another model is the Deangelo Model. The Deangelo Model uses total accruals from the previous period as a measure of the normal accruals; if the current accruals are greater than the previous, this would indicate excessive discretionary accruals. Both the Healy and Deangelo Models produce less accurate results because they assume that nondiscretionary accruals remain constant

Castleberry: Relation between Revenue Accruals

over time. If the levels of nondiscretionary accruals vary each period, both models produce erratic results.

Another model used to estimate discretionary accruals is Industry Model. This model relaxes the assumption that nondiscretionary accruals are constant over time. The Industry Model uses the median total accruals for firms in the same industry to determine nondiscretionary accruals.

The Jones Model, like the Industry model, takes into account that nondiscretionary may not be constant. Dechow et al. (1995) show that the Jones Model is the most popular and accurate accrual model. This model uses the total assets in conjunction with other variables (change in revenues, gross property, plant, and equipment) to determine nondiscretionary accruals.

This study uses a modified version of the Jones Model to determine the level of discretionary quarterly revenue accruals. The Modified Jones Model takes into account the size and growth of the particular company in question, producing more accurate results. The variables used in the Modified Jones model used in this analysis are: change in revenue (denoted by Δrev), change in cash ($\Delta cash$), and assets. The relationships described by the model are as follows: as revenues increase (Δrev), there is likely to be more nondiscretionary accruals. As cash increases ($\Delta cash$), there is also likely to be an effect on nondiscretionary accruals. As the size of the company increases (assets), there is likely to be more nondiscretionary accruals.

Because an estimate of normal nondiscretionary accruals is needed, a regression analysis was used to estimate the normal relationship between accounts receivable and these three factors from the Modified Jones Model. Non-fraud companies were used to estimate the normal relationship and this formula was used:

$$\Delta A/R_{NF} = \text{Intercept}_{NF} + \beta_1 * \Delta \text{Cash}_{NF} + \beta_2 * \Delta \text{Rev}_{NF} + \beta_3 * \text{TotalAssets}_{NF}$$

where:

- $\Delta A/R$ is the change in accounts receivable;
- Intercept represents the normal intercept for non fraudulent companies;
- β_1 represents the normal relationship between the ΔCash and $\Delta A/R$ for non-fraudulent companies by industry;
- β_2 represents the normal relationship between ΔRev and $\Delta A/R$ for non-fraudulent companies by industry;
- β_3 represents the normal relationship between TotalAssets and $\Delta A/R$ for non-fraudulent companies by industry.

After using the Modified Jones Model to determine the normal relationships for non-fraud companies, the coefficients from the regression were used to estimate the nondiscretionary accounts receivable for the sample of fraud companies based on normal relationships between $\Delta cash$ and $\Delta A/R$, Δrev and $\Delta A/R$, and Total Assets and $\Delta A/R$ from non-fraud companies.

$$\text{Est}(NDA/R_F) = \text{Intercept}_{NF} + \beta_1 * \Delta \text{Cash}_F + \beta_2 * \Delta \text{Rev}_F + \beta_3 * \text{TotalAssets}_F$$

Thus, the excessive discretionary revenue accruals equal the difference between the actual accounts receivable of the fraud companies and the estimated discretionary accounts receivable.

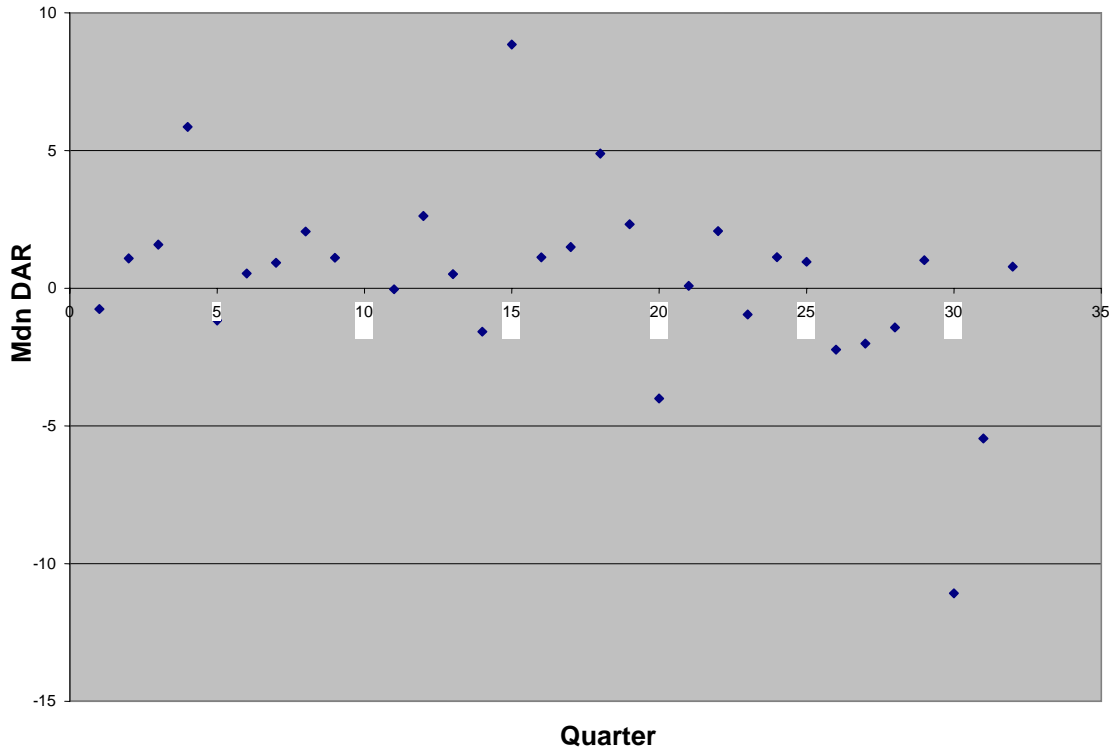
$$DAR_F = \text{Actual } A/R_F - \text{Est}(NDA/R_F)$$

Results

The basic results of this study are presented in Table 2. In Table 2 the median discretionary accounts are plotted by quarter. Quarters 1-16 are the four years prior to the year cited by the AAER as the fraud year, 17-20 are the fraud quarters, and quarters 21-32 are during the years subsequent to the fraud year.

Table 2.

This table presents median discretionary accounts receivable by quarter for three years before fraud year and two years after.



Mdn DAR= median discretionary Accounts receivable calculated by using the Modified Jones Model.

Quarter= fiscal quarter, where 17 is the first quarter of the fraud year, 18 is the second quarter of the fraud year, 19 is the third quarter of the fraud year, and 20 is the fourth quarter of the fraud year.

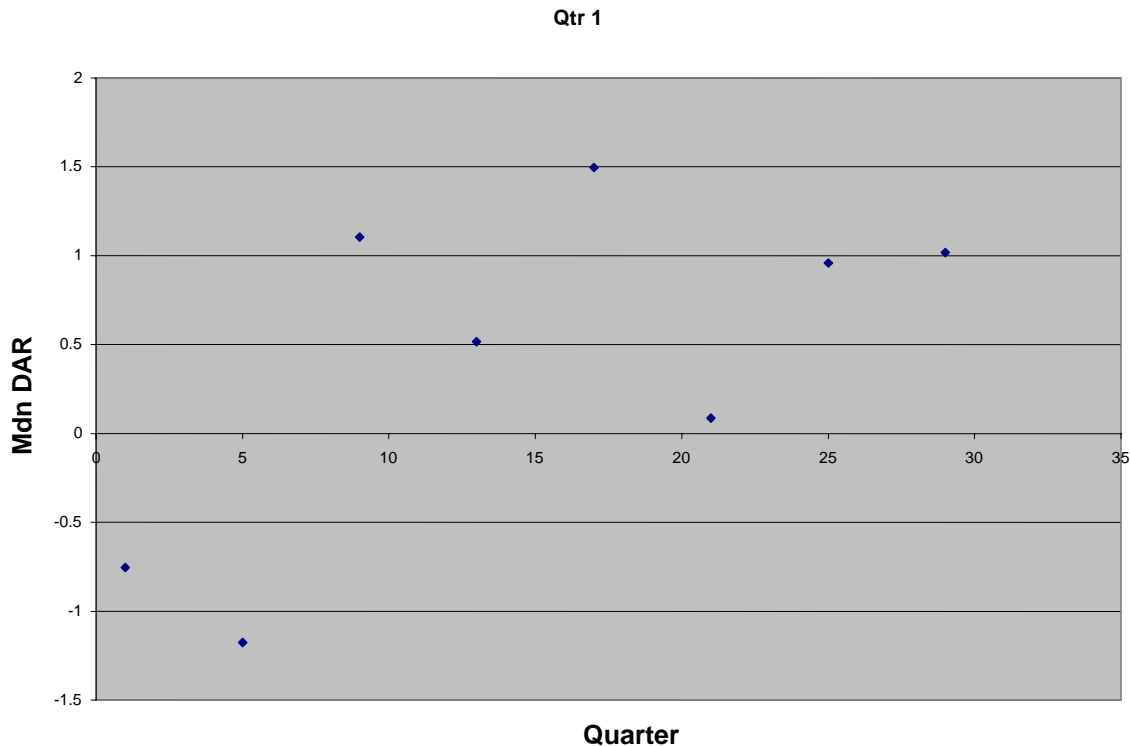
From this table there is no discernable pattern of the median discretionary accounts receivable. Three of the four quarters of the fraud year appear to be at the upper level of the median discretionary accruals; however the fourth quarter is less than normal

Castleberry: Relation between Revenue Accruals

accounts receivable levels. The evidence does not support the hypothesis that quarterly revenue pressures are a significant factor in fraudulent earnings management.

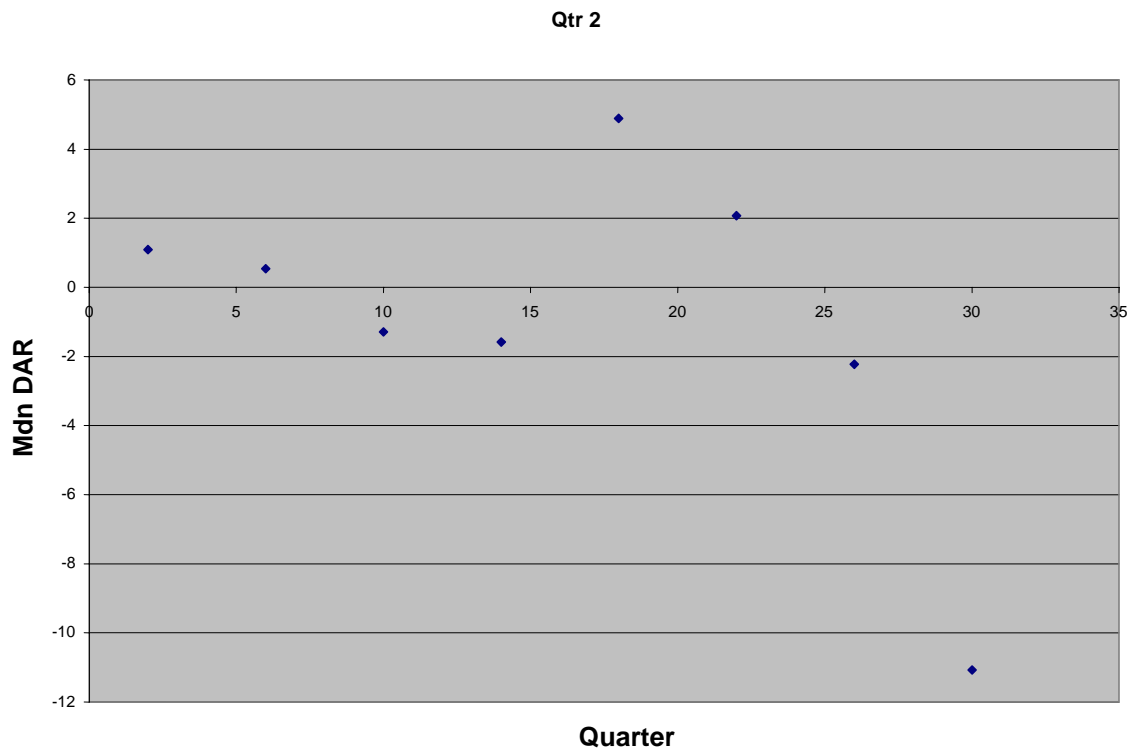
I will now isolate the discretionary accounts receivables by fiscal quarter. In Table 3, discretionary accruals for first fiscal quarters are compared. In Table 3, quarter 17 is the first fiscal quarter in the fraud year. Table 3 supports the hypothesis that discretionary accrual are above normal in the first quarter of the fraud fiscal year. In the years prior to fraud, there is a general increase in discretionary accounts receivables leading up to the fraud year. The highest level of discretionary accounts receivable occurs in the fraud year.

Table 3.



In Table 4, discretionary accruals for second fiscal quarters are compared. In Table 4, quarter 18 is the second fiscal quarter in the fraud year. Table 4 also supports the hypothesis that discretionary accrual are above normal in the second quarter of the fraud fiscal year. In the years prior to fraud, the level of median discretionary accounts receivable hovers around 0. Again, the highest level of discretionary accounts receivable occurs in the fraud year.

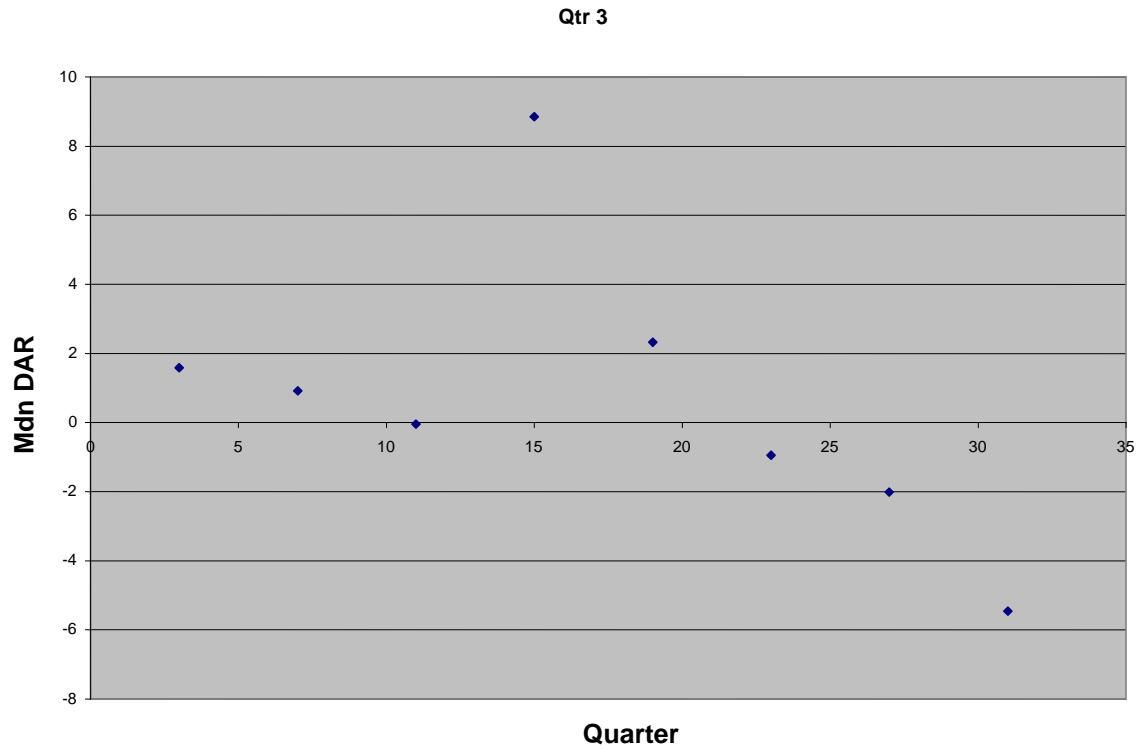
Table 4.



In Table 5, discretionary accruals for third fiscal quarters are compared. In Table 5, quarter 19 is the third fiscal quarter in the fraud year. Table 5 also supports the hypothesis that discretionary accrual are above normal in the third quarter of the fraud fiscal year, although to a lesser extent. The level of discretionary accounts receivable is higher than all other years except for the year prior to the fraud year. In the year prior to fraud, the level of median discretionary accounts receivable is the highest.

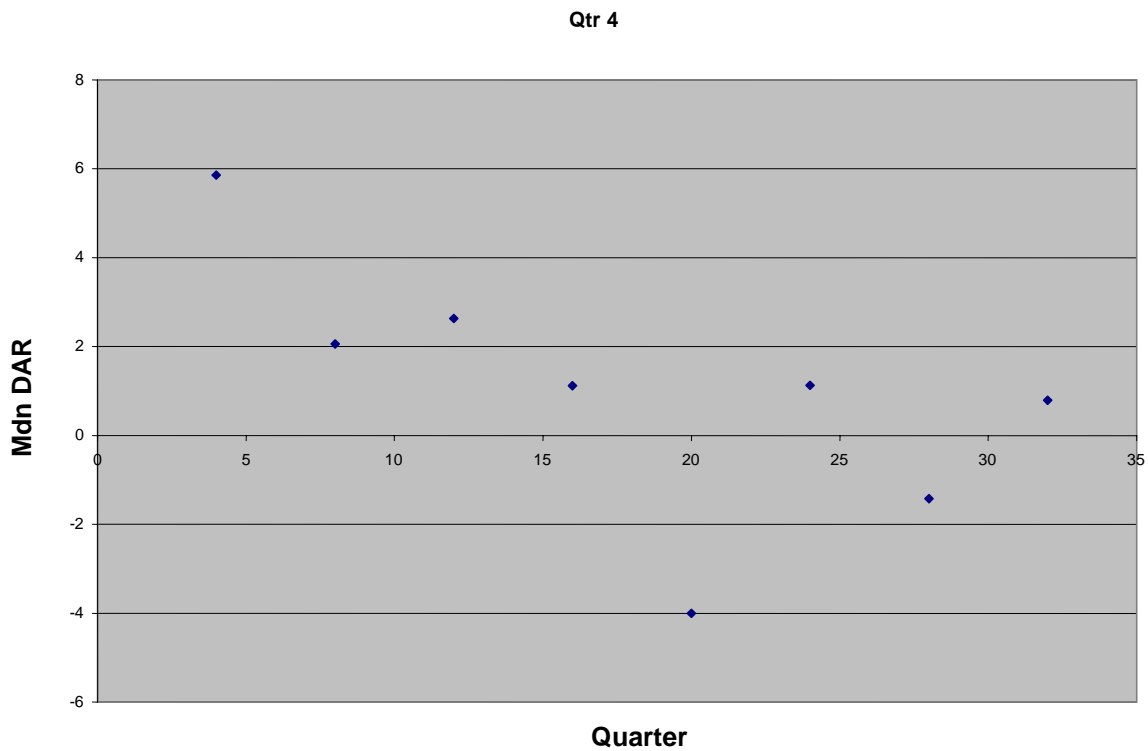
Castleberry: Relation between Revenue Accruals

Table 5.



In Table 6 discretionary accruals for fourth fiscal quarters are compared. In Table 6, quarter 20 is the fourth fiscal quarter in the fraud year. Table 6 does not support the hypothesis that discretionary accrual are above normal in the fourth quarter of the fraud fiscal year. In the years prior to fraud the level of median discretionary accounts receivable are above normal, but are significantly less than normal in the fraud year.

Table 6.



Conclusion

In conclusion, the results present weak evidence that quarterly revenue pressures result in fraudulent earnings management. In the fraud fiscal quarters 1, 2, and 3, the evidence supports the hypothesis; however, quarter 4 is inconsistent with the hypothesis. The large negative discretionary accounts receivable in quarter 4 are possibly a reversal of the large level of discretionary accounts receivable from the prior quarters. This suggests that further research is required. Overall, the evidence suggests that excess quarterly revenues may signal fraudulent reporting.

Castleberry: Relation between Revenue Accruals

References

- Arya, Anil, Glover, Jonathan C., Sunder, Shyam. 2003. Are Unmanaged Earnings Always Better for Shareholders? *Accounting Horizons*, 17, 111-116.
- Beineish, Messod D. 2001. Earnings Management: A Perspective. *Managerial Finance*, 27, 3-17.
- Chan, Konan, Jegasdeesh, Sougiannis, Theodore. (2004) The Accrual Effect of Future Earnings. *Review of Quantitative Finance and Accounting*, 22, 97-121.
- Dechow, Patricia, Sloan, Richard G., Sweeney, Amy P. 1995. Detecting Earnings Management. *The Accounting Review*, 70, 193-225.
- Dechow, Patricia M., Skinner, Douglas J. 2000. Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators. *Accounting Horizons*, 14, 235-250.
- Magrath, Lorraine, Weld, Leonard G. (2002) Abusive Earnings Management and Early Warning Signs. *The CPA Journal*, 72, 50.
- Parfet, William, U. 2000. Accounting Subjectivity and Earnings Management: A Preparer Perspective. *Accounting Horizons*, 14, 481-488.
- Securities and Exchange Commission Accounting and Enforcement Releases. (n.d) Retrieved June 10, 2005, from <http://www.sec.gov/divisions/enforce/friactions.shtml>.
- Tunick, Britt Erica. 2004. Looking for Red Flags CFOs Face Continued Scrutiny Over "Managed" Earnings. *The Investment Dealers' Digest*, April 26, 2004,(1).
- Vinciguerra, Barbara, O'Reilly-Allen, Margaret. 2004. An Examination of Factors Influencing Managers' and Auditors' Assessments of the Appropriateness of an Accounting Treatment and Earnings Management Intentions. *American Business Review*, 22, 78-87.

HOW HAS THE INTERNET CHANGED THE BUSINESS, EDUCATION, HEALTHCARE INDUSTRIES?

Alvie Coes, III, McNair Scholar

Dr. Sonya Shepherd, Research Mentor
Department of Information Services
Zach S. Henderson Library

Abstract

This study will examine how the Internet has continuously changed the business, healthcare, and education industries. Specific subtopics researched from each major area include e-commerce, online banking, distance learning, web-based training, telemedicine, and e-health. Beginning with the business industry, the researcher looked at e-commerce and how it has become a part of our economy helping companies reduce costs and increase revenue. Additionally, the development and use of online banking was also addressed to help understand why over 50 million Americans find online banking convenient and easy to use. Secondly, the education industry has improved due to distance learning and web-based training. These resources have allowed us to minimize location as a factor of pursuing an education. Distance learning and web-based training has allowed students and teachers to connect from all parts of the world. The results from this research will reveal there has been an increase in society's participation in distance learning and web-based training. Finally, the researcher will conclude by looking at the improvements in the healthcare industry due to the Internet. Telemedicine and e-health has allowed rural areas to receive better healthcare. The results from this research are needed to understand why telemedicine and e-health are needed to overcome the problems of distance and enable services to be delivered more efficiently. Content analysis and review of literature will be used to analyze and address the research question.

Introduction

The Internet is continuously changing our society. The development and growth of the Internet has changed the business, education, and healthcare industries. Everyday people use services such as online banking, distance learning, and telemedicine to provide services that are beneficial to society. It is essential to realize that the Internet provides services that are fundamental and necessary for us to enjoy the many technological advances that are changing our world. This research specifically examines online banking, e-commerce, distance learning, web-based training, e-health, and telemedicine to understand why more Americans are using these services.

What we know as the Internet originally started as ARPANET. ARPANET was created by a team of college professors in 1969. It was used by the Pentagon to link different branches of the military so information could be shared using intranets. Government agencies later began to use the Internet to share information between agencies. In the mid 1990s, the Internet became

Coes: Internet changed Business, Education, and Healthcare

popularly used by the public as a source of information. Now the Internet can be used to bank online, take courses, shop, and find health related information.

Statement of the Problem

It is important for individuals to understand the impact the Internet is having on our society. The business, education, and healthcare industries are continuously being changed. People need to understand how services such as Internet banking, e-commerce, web-based training, and E-Health are providing convenient opportunities for many people. The researcher examined each industry closely to understand the significant role the Internet is having on our society.

Methodology

The researcher examined the literature from the last five years. Articles were read and analyzed by the researcher in order to find themes, also known as conducting a content analysis. Reviewing different sources of literature allowed the researcher to find and discuss specific concepts found within the information (Weitzman & Miles, 1995).

Business

Two major areas of the business industry where increased activity has occurred due to the Internet are Internet banking and E-commerce. In 1995, Presidential Bank began to offer its customers the ability to bank online (Bidgoli, 2002). Now over 50 million Americans have the opportunity to use Internet banking. Furthermore, e-commerce has improved the business industry by allowing businesses and consumers to market and sale their products to each other in a convenient way.

Internet Banking

Internet banking refers to the use of the Internet as a channel in the delivery of banking products and services (Starita, 1999). With the development and growth of Internet banking, it is no longer necessary to conduct all of your banking in person. Time savings, convenience, and 24-hour access are the main reasons consumers have turned to online banking. The Internet is continuously changing traditional relationships and services throughout the banking industry. The opportunity to bank online is heavily influencing consumers who like to transfer funds, pay bills, and manage accounts without leaving from home. Ten years ago the first U.S. bank began to offer its consumers the opportunity to engage in online banking. Furthermore, Internet banking has become extremely popular and customers are appreciating the efficiency associated with it. According to a study done by Nancy Feig (Feig, 2004):

- ❖ Presidential Savings Bank was the first to offer online banking in October of 1995.
- ❖ Online Banking web sites are the fifth most common sites accessed by employees at work.
- ❖ Of those who use Internet banking, 95% use it to monitor their accounts, 64% transfer funds, and 55% pay bills.
- ❖ Twenty percent of people who use the Internet, access the web sites of banks and credit unions.

- ❖ The proportion of households using Internet banking grew fivefold between 1995 and 2000, and threefold between 1999 and 2003.

Internet Banking is continuing to show rapid growth. With over 53 million Americans banking online, it has become one of the fastest growing Internet activities. Studies show that Bank of America has more online customers than any other institution (Tellervision, 2005). With its 12.4 million customers we are able to realize how important Internet banking is becoming. However, there are advantages and disadvantages of using Internet banking compared to traditional methods. A study from the editors of Tellervision journal lists some advantages and disadvantages of Internet banking as (Tellervision, 2005).

Advantages

- ❖ Having the ability to bank from any location that has an Internet connection.
- ❖ Being able to work offline after downloading software and inserting account information.
- ❖ Being able to access account information 24 hours a day, 7 days a week. This access allows you to monitor your accounts, transfer funds, view cleared checks, and set up bill payments.
- ❖ Internet banking is more cost effective for banks. This should result in lower fees for customers.

Disadvantages

- ❖ Having access to a computer with an Internet connection may not be possible
- ❖ Having the ability to access information is dependent on technology. If servers crash then you cannot access your account.
- ❖ If you ever change banks, you may have to switch software and enter your old account information into a new program which could be very time consuming.

Banks are really beginning to target the small business market and are finding that the Internet is a powerful tool to use when attracting customers. The Internet has the capability to reach far more people and save money. "Online banking reduces delivery costs especially on routine transactions," says Maria Erickson (Leuchter, 1998). According to PSI, the number of small companies using the Internet has more than doubled to 42%. The number of business owners who are using a personal computer for business and Internet transactions is steadily increasing (Leuchter, 1998).

The future of Online Banking is upon us. The Internet as a financial market is developing rapidly. One year ago there were fewer than one hundred financial firms with representation on the Internet. Today there are more than five hundred banks that have web sites (Bank Technologies Group, 2001). The Internet is providing services that customers are finding efficient and convenient. Fewer customers are using traditional banking methods by visiting bank lobbies and drive-thru lanes. However, more customers are using ATM's, home banking, and the Internet to conduct their financial business (Tellervision, 2005). By bringing multiple competitors into the market, Internet banking is now available at over 500 banks in over 30 countries. Due to the tremendous growth of the Internet banks and other financial institutions, competitors will have to adjust to a rapidly changing society.

Coes: Internet changed Business, Education, and Healthcare

With the emergence of the Internet, the banking industry has become more dynamic. More financial institutions are beginning to use the Internet in order to reduce cost and reach more potential customers. Reviewing current statistics and those projected in the future have allowed businesses and consumers to understand what role the Internet is playing in the banking industry (Siaw & Yu, 2004). More people are using this service because it is providing efficiency as well as convenience that consumers enjoy. Small businesses find this resource helpful because it is a marketing tool allowing them to fairly compete with other businesses that may be larger or more well-known. And the Internet is steadily increasing competition, which in return drives prices down for consumers.

E-commerce

In addition to Internet banking, e-commerce is providing a way for companies to find new consumers without people leaving the facility. E-commerce can be defined as the buying and selling of goods and services over the Internet (Bidgoli, 2002). Similar to Internet banking, e-commerce is becoming popular for businesses because it is also cost effective. Not only is e-commerce increasing revenue, but it is also allowing companies to cut costs. The use of this resource is improving traditional relationships by using computer networks and the Internet to deliver timely, useful and reliable information. E-commerce is creating new opportunities for conducting business online. As companies continue to develop their e-commerce strategies, executives are finding that the Internet is changing the way they do business (Williams, 2000). The major beneficiaries of e-commerce include but are not limited to banks, the government, travel agencies, marketing agencies, and universities. E-commerce is being used in the following ways (Bidgoli, 2002):

- ❖ Amazon.com provides access to millions of books electronically.
- ❖ Drugstore.com offers prescription refills and sells new drugs, vitamins, and other health and beauty products online.
- ❖ American Express successfully uses e-commerce for credit card transactions.
- ❖ Dell Computer and Gateway sell computers through their websites and allow customers to create their own systems while they are on the Internet.

Table 1: Top E-commerce Countries by Sales and Revenue in Billions

Country	Total Sales%		E-commerce sales	
	2004 (%)		2000 (\$)	2004 (\$)
U.S.	13.3		488.7	3,189.0
Japan	8.4		31.9	880.3
Germany	6.5		20.6	386.5
United Kingdom	7.1		17.2	288.8
Australia	16.4		5.6	207.6
France	5		9.9	206.4
South Korea	16.4		5.6	205.7
Taiwan	16.4		4.1	175.8
Canada	9.2		17.4	160.3
Italy	4.3		7.2	142.4

Note: (Bidgoli, 2002)

Table 1 shows how much money e-commerce generated in revenue. The top ten countries are listed in order of how much money they generated. The objective of traditional and electronic commerce is to generate revenue. However, both achieve this objective differently. In e-commerce, the Internet is used so there may not be a physical store, so most transactions occur with the buyer and seller in different locations. E-commerce can be divided into many smaller categories. Studies show that the two major categories that generate the most revenue and that occur the most are business to consumer (B2C) and consumer to consumer (C2C) (Greissel, 2001). In B2C e-commerce businesses sell directly to consumers. Wal-Mart Stores, Inc., CVS drugs, and many other retail stores are good examples of companies who have benefited from using e-commerce to market and sell their products to consumers. These companies have the ability to be more successful than traditional companies and pure e-commerce sites because customers still have the ability to visit the store. Credibility is a big concern for consumers who use e-commerce. Knowing that they have the ability to shop online and still visit stores for customer service makes them more comfortable buying products online. According to a Jupiter Research Report, business to consumer e-commerce will keep its positive momentum, growing an estimated 17% annually to over \$117 Billion by 2008 (Gatti, 2004).

Furthermore, Consumer to consumer e-commerce (C2C) is also growing rapidly. The C2C category involves transactions among individuals using the web. With C2C commerce consumers are able to buy and sell directly from other individuals using the Internet. In 1995, Pierre Omidyar launched eBay which is now the world's largest online trading site. The development and growth of eBay has created a new market (Bidgoli, 2002). Now people are able to buy and sell items in more than 4,300 categories from antiques to toys. Consumers have found eBay easy to use due to the wide range of products that it offers. E-commerce is continuing to grow and is providing a reliable and convenient method of shopping online.

Furthermore, e-commerce presents advantages along with disadvantages when compared with traditional businesses. In the e-commerce world doing business around the globe 24 hours a day, 7 days a week has become a reality (Bidgoli, 2002). Customers anywhere who are connected to the Internet are able to buy and sell products online. Holidays, time zones, and weekends do not pose problems with shoppers who participate in e-commerce. Possible advantages and disadvantages include (Bidgoli, 2002):

Advantages

- ❖ Business is conducted around the globe 24 hours a day, 7 days a week
- ❖ Personalized service is available
- ❖ Developing relationships with the financial community
- ❖ Increases numbers of customers
- ❖ Increases flexibility and ease when shopping

Disadvantages

- ❖ Security issues
- ❖ Accessibility, everyone is not connected to the Internet
- ❖ Credibility
- ❖ People lacking understanding of how e-commerce works

With the development and growth of e-commerce, consumers and businesses now have an additional marketing tool that can be used to recruit shoppers. E-commerce has steadily provided

businesses with an opportunity to increase revenue and reduce costs at the same time. Research has indicated that more consumers are using e-commerce because it is convenient and easy to use (Greissel, 2001). With e-commerce continuing to grow, businesses and consumers are eager to see where it will take us in the future.

Education

In addition to the business industry, education and training via the Internet are growing rapidly. Reduced training costs, world wide accessibility, and improved capabilities have made electronic education popular. The education industry is steadily being changed by the use of educational technology and growing partnerships between students. Distance learning and web-based training are two major areas that are growing due to the use of the Internet. The explosive growth of online education and virtual classrooms is complementing traditional instruction by helping students receive a good education that is tailored to their specific needs (U.S. Department of Education, 2005). Further proof that society is becoming more connected through technology can be seen in how organizations are delivering workplace training.

Web-based Training (WBT)

Switching from classroom to WBT has allowed companies to save money when educating their employees. Travel expenses, facility fees, and office equipment are a few of the savings that are realized when individuals participate in web-based training (Lee & Chamers, 2003). Another advantage of WBT is efficiency. It allows companies to communicate and train employees all over the world. Web-based training is a practice that managers enjoy because it provides them with an alternative form of training. With flexibility and time, online training programs have provided balance for those who are trying to manage work and school (Lee & Chamers, 2003). Employees have the ability to use several methods of educational instruction to accumulate and receive credit or fulfill grade requirements. WBT is taking over the education industry. Just to get a sense of how fast web-based education is growing consider these facts (Driscoll, 2002):

- ❖ The U.S. market for web-based training generated \$197 million in revenue in 1997, according to a report published by the International Data Corporation (IDC). The IDC report forecasts that this market will exceed \$6 billion by 2002 (p. 21).
- ❖ A survey by the Graphic, Visualization and Usability Center (GVU) at Georgia Tech University found 64% of those who use the Internet in the U.S. have experienced Web-based training (p. 21).
- ❖ Training Magazine published study results in 1998 that revealed 19% of formal training courses are delivered via the Internet (p. 21).

Studies show that Web-based training is continuing to rapidly grow. The advantages of WBT make it popular among people pursuing an education. Companies were originally attracted to using Web-based training because of its potential to save money (Driscoll, 1999). The use of web-based training has saved money by eliminating the need for traditional media such as manuals and workbooks. This allows companies to save money by not having to print and distribute hundreds of copies of paper materials. Using Web-based training has enabled companies to also save money they would normally spend on items such as hotel rooms, meals, and travel expenses. Firms are able to save over \$1,500 per employee (Driscoll, 1999). Companies that have heavily invested in computers and networks find that web-based training is another option that can be used to train employees. Web-based training gives companies the ability to track enrollment, view grades, and post assignments online. Companies and employees

that understand WBT realize the potential success that it offers. This technology gives companies a competitive advantage allowing them to compete in a global market. However, disadvantages of WBT include limited Internet access, security issues, and credibility. Many areas of our country do not have reliable Internet access or access to the Internet may be limited to certain groups. With hacking being a serious problem, many people do not feel safe entering personal information over the Internet. Finally, students and teachers are not always able to communicate on a face-to-face basis. Many students like to develop a close relationship with their professors and other classmates, and WBT may limit this opportunity.

The vast number of companies who have employees worldwide are greatly benefiting from Web-based training. They are able to educate a global workforce using the Internet. This innovative technology makes it possible to simultaneously train employees around the globe (Driscoll, 1999). The use of Web-based training offers a great way to train employees without spending days in an actual class. Courses are provided that give companies information about existing products and keep them up to date on current projects. Since more people are working from home, web-based training is more effective for them. The idea of virtual offices has allowed companies to cut facility costs and spend more money educating employees online (Denton, 2001).

Web-based training is one of the fastest growing methods of delivering quality education. Companies and firms are implementing WBT since it has allowed them to be more efficient. Web-based training is relatively new; therefore, it is important to learn the extensive role it is playing in the workforce.

Distance Learning

Historically, learning has taken place in traditional classrooms with educational strategies. Tools such as videos, books, and other devices were normally used and education was confined to the actual school. In addition to Web-based training, distance learning is providing new methods of delivering education. The Internet has enabled individuals to understand the advantages that the Internet offers education. These services have drastically changed the world of education. Distance education takes place when educational experiences are delivered to remote locations via audio, video, or computer technology (U.S. Department of Education, 1999).

Colleges and universities have found distance learning to be an effective program for students. Implementing this technology has led to increased enrollment and reduced the costs of education for those students. It is becoming an important feature of post-secondary education. In the U.S., over 55,000 distance learning courses are being offered and numbers are steadily increasing (Vail, 2003). This service provides a number of benefits for the education industry and provides excellent opportunities for those with limited access to education.

Characteristics that make distance learning such an effective program include flexibility, effectiveness, efficiency, interactivity, and affordability (Deal, 2002). Distance learning provides flexibility so that students may access learning materials at times that are convenient for them. Work can be completed around schedules and submitted electronically. Distance learning saves time and money. Different software allows the experience to be interactive as well. Video and audio conferencing can be used to supplement e-mail, chat, and other multi-media applications used in the process. Disadvantages of distance learning include limited Internet access, security issues, and credibility. Similar to WBT, some areas do not have the Internet or Internet access is limited to only a few individuals. Hacking and other security issues have made individuals

reluctant about using the Internet. Finally, not all individuals feel comfortable with technology. The relationship that you can develop with professors and other classmates may not always be available using distance learning (Deal, 2003).

Distance learning is going to remain prevalent. The benefits of this learning program are making it popular throughout the education industry. Schools, colleges, and universities are realizing that more students are enrolling into institutions that provide and support distance learning. Furthermore, through distance learning students are able to reduce the costs of a good education. With the growth and development of the Internet, learning activities and other assignments are becoming more and more possible through the Internet.

Health

One of the most encouraging changes this decade is the way technology empowers patients to take control of their healthcare services. In particular, two services, e-health and telemedicine can be defined as the use of the Internet to deliver health related products and services. The arrival of the Internet offered the opportunity to reinvent medicine and healthcare delivery. The e-health era is nothing less than the digital transformation of the practice of medicine, as well as the business side of the health industry. Healthcare is now arriving more effectively due to the developments in information technology (Coile, 2000).

E-Health

Healthcare is an industry that involves many transactions. The use of the Internet saves money and provides conveniences. The Internet is growing and providing more individuals with information dealing with health related issues. For example, there are three major areas in the healthcare industry that use the Internet: patient self-scheduling, Internet-based patient records, and patient chat groups. The Internet is allowing patients to scan their doctor's calendar for appointment dates and other information they may find useful. This system is proving to be important because it is allowing patients to eliminate reminders, long telephone calls, and confusing voice mail instructions. E-health allows patients to view and print a copy of their medical records (Coile, 2000). Internet health information is being provided by sites such as drkoop.com to encourage individuals to register their health information and monitor their status. Patients' identifiers (e.g. social security numbers or other forms of identification) can be used to access their online medical history. Patient support groups are becoming more popular as well. More importantly, the Internet is empowering people to play a proactive role in managing their healthcare (Coile, 2000). Across the nation, more people are using the Internet to research information, share literature, buy products, and discuss diagnosis. Health related products and services that are widely sold on the Internet include (Coile, 2000).

- ❖ Prescription drug refills
- ❖ Over the counter drugs
- ❖ Medical supplies
- ❖ Medical equipment
- ❖ Vitamins
- ❖ Home fitness equipment

Telemedicine

In addition to e-health, Internet-based telemedicine is also being utilized in the healthcare industry. Telemedicine can be defined as the use of interactive equipment to link practitioners

and patients in different locations (Coile, 2000). The continuous growth of this feature has created new opportunities in healthcare. The economics of healthcare through telemedicine are improving and individuals are finding it convenient and efficient. Telemedicine is becoming more popular and the prices associated with it are declining. The continuous growth of this feature has created new opportunities for the healthcare industry. Due to the Internet, people living in rural areas are able to receive better healthcare. The number of active telemedicine programs is increasing. Between 1994 and 1999, the number of programs increased from 24 to 170 (Peterson & Lamarche, 2000). Disadvantages of E-Health and Telemedicine include security issues, limited Internet access, and credibility.

The growing development of telemedicine, the rising use of e-health, and the complete growth of the Internet is changing the way healthcare is being delivered. Rural areas receiving better healthcare, patients' access to vital information, and lower costs are major reasons why health professionals are implementing this technology. Telemedicine and e-health are becoming more Internet-based. The challenge facing this vital and interesting technology will be to manage and provide an effective transition in this evolving healthcare industry.

Summary, Conclusions, and Implications

The Internet has changed all three industries – banking, education, and health. The advantages and disadvantages of using the Internet in the business, education, and healthcare industries are consistent. Advantages include convenience, 24 hour access, flexibility, interactivity, and countless others. Disadvantages of using the Internet in these industries include security issues, credibility, and lack of internet access. Information from this research indicated that advantages and disadvantages exist when using the Internet in each industry. This information is very important. People need to understand and be aware of the many different services that the Internet offers. The Internet is continuously changing our society especially the business, education, and healthcare industries.

With over 50 million Americans using Internet banking it has become a huge part of the banking industry. E-commerce is also improving the business industry by allowing companies to increase revenue by being able to market to more potential customers. In the education industry WBT and distance learning are popular among students. More students are enrolling in universities that provide courses online and use distance learning. Last but not least, E-health and telemedicine are providing numerous opportunities for practitioners and patients. Now that individuals have this information, it is important they know what new opportunities exist in each industry.

References

- Bidgoli, H. (2002). *Electronic commerce principles & practice*. (1 ed.). San Diego, CA: Academic Press.
- Coile, R. (2000). The digital transformation of healthcare. *The Physician Executive*, 26(1), 8-13.
- Day, E., & Argarwal, R. (1998). The impact of the internet on economic education. *Journal of Economic Education*, 29(2) 99-111.
- Deal, W. (2002). Distance learning: teaching technology online. *The Technology Teacher*, 61(8), 21-27.
- De Koster, R. (2003). Distribution strategies for online retailers. *IEEE Transaction of Engineering Management*, 50(4), 448.
- Denton, J. (2001). *Distance education and technology in the classroom*. (ERIC Document Reproduction Service No. ED 454812)
- Driscoll, M. (1999). Web-based training in the workplace. *Adult Learning*, 10(4), 21-26.
- Feig, N. (2004). Bank on it, growing online. *Community Banker*, 13(6), 64.
- Gatti, J. (2004). Online b2c sales to surpass \$117 billion by 2008. *Jupiter Research Report*. Retrieved from <http://www.directmarketingmag.com>
- Greissel, M. (2001). E-business, the second big bang? *Industrial Paint & Power*, 77(9), 22-23.
- Lee, D., & Chamers, T. (2001). *Web-based training & corporate America*. (ERIC Document Reproduction Service No. ED470195)
- Leuchter, M. (1998). Online banking for mom & pop. *USBanker*, 108(8), 24-28.
- Peterson, M. & Lamarche, D. (2000). Telemedicine: evolving technology in an e-health care world. *Managed Care Quarterly*, 8(3), 15-22.

Raysman, R., & Brown, P. (2001). Electronic banking developments. In SCN Education BV (Ed.), *Electronic Banking*. (pp. 6-100). Braunschweig: Vieweg.

Siaw, I., & Yu, A. (2004). An analysis of the impact of the Internet on competition in the banking industry using Porter's five forces model. *International Journal of Management*, 21(4), 514-521.

Starita, L. (1999). *Online banking: a strategic prospective financial service*. Content Overview Report (R-08-7031-Gartner).

Tellervision, (2005). Consumers flock to online banking. *Teller Vision*, (1330), 3.

U.S. Department of Education. (2005, Jan). Educational technology plan. Retrieved June 21, 2005, from <http://www.ed.gov>.

Vail, K. (2003). School technology grows up. *American School Board Journal*, 190(9), 34-38.

Weitzman, E., & Miles, M. Computer programs for qualitative analysis. Retrieved July 03, 2005, from <http://www.maxweber.hunter.cuny.edu>.

Williams, K. (2000). How will e-commerce change your business? *Strategic Finance*, 82(4), 21-25.

THE INDIRECT EFFECT OF EDUCATIONAL ATTAINMENT, OCCUPATION AND EMPLOYMENT STATUS OF BLACK-WHITE INCOME DIFFERENCES

Calvina Colquitt, McNair Scholar

Dr. William L. Smith and Dr. Pidi Zhang, Research Mentors
Department of Sociology and Anthropology

Abstract

Understanding racial variation in income has become increasingly important as the U.S. makes efforts to alleviate inequality. Based on 2000 Census data, this study examined the indirect relationship educational attainment, occupation, and employment status has on black-white income differences. On average, whites make a reported \$11,000 more than blacks. A simple linear regression analysis indicates race was found to have a significant effect on income. Educational attainment, occupation, and employment status were found to be highly correlated with income variation as well as with race. The results from a two-equation linear regression model show that race has a strong indirect effect on income through education and employment. The indirect effect of race on earnings through education, occupation, and employment implies an interaction effect, therefore, interaction effects were examined and very significant differences were found for blacks and whites. This study demonstrates that even with comparable educational attainment and occupations blacks and whites still show differences in income. Implications of these findings and possible policy recommendations to reduce inequality are discussed.

The Indirect Effect of Educational Attainment and

Employment Status on Black-White Income Differences

While equal opportunity programs have attempted to level the playing field for blacks and other minorities, the truth of the matter is that equality of condition has not been achieved by the majority of nonwhites in America. White attitudes about race have improved during the past several decades, yet Shuman et al. (1997) indicate that these changes are transparent because many whites continue to be insensitive to the legacy of discrimination that continue to plague African Americans. Most whites believe it is no longer admissible to discriminate or use racial slurs against blacks and that the struggle of the African American community for equality of condition has been achieved (Brown et al., 2003; Shuman et al., 1997). The question now becomes, why then do disproportionate poverty and income disparity continue to plague the black community?

Wealth distribution

Comparing white and minority families at the same income level, whites enjoy an enormous advantage in wealth (Conley, 1999). Conley focuses on race and other factors that contribute to racial inequality in America. Looking at the wealth accumulation from the perspective of class differences, Conley discusses the legacy of resources that many whites have already accumulated which automatically increases their chances of

achieving success and increasing their assets. Whites often take measures that sometimes unknowingly, hinder minorities from attaining affluence (i.e. exclusion) to preserve their own accumulation of wealth. There is also a profound difference in opportunities for mobility between blacks and whites (Hertz, 2005). Hertz (2005) found that, when comparing blacks and whites from similar low income backgrounds, only 17 percent of whites lived out their adult lives in this same income bracket while 42 percent of blacks remained there as adults. An even more significant disparity was found between blacks and whites who were born poor but achieved upper-class status as adults. As of 1999, black per capita income was only 64 percent of white per capita income. Jaret et al. (2003) investigated various areas of the socioeconomic structure to see which area had the most influence in determining black-white income differences. They surveyed people from 112 metropolitan areas and found that racial differences in education and employment have the strongest impact on income inequality.

Education matters

The achievement gap between blacks and whites has been a nagging concern among educational and occupational researchers for decades. Although there have been some improvements, blacks and whites are still academically unmatched. The educational system is one of the many social institutions that send messages about the world and their place in the social hierarchy. According to Graybill (1997), students are prone to academic abilities reflective of their teacher's expectations. Graybill discusses the cultural discontinuity that occurs between white middle-class teachers and black students. This cultural discontinuity causes white middle-class teachers, frequently female, to view the behavioral characteristics of black male students as disruptive. White teachers tend to have negative ideas about nonwhite students which can be attributed to the messages they received from their own upbringing and the media. Graybill argues that the negative attitudes demonstrated by teachers toward students are directly related to their performance in school in regards to grades, test scores and overall attitudes toward school. Blacks are much more likely than whites to be placed in EMR (educable mentally retarded or special education/slow learner) classes and whites are much more likely than blacks to be identified and placed in gifted classes. Of the 1,412,011 students who were identified as gifted, 72.4 percent were white and 12.1 percent were black (Ford, 1998). Over four decades of data indicate that African American students are underrepresented in gifted programs and they are less likely to be referred by teachers for screening and placement in these programs perpetuating the notion that blacks are intellectually inferior (Ford, 1998). Ford argues that teachers seldom understand culturally diverse students and thus focus on the weaknesses and negative attributes of these students.

A growing body of research indicates that expectations from authority figures (i.e. teachers) influence a student's academic performance (Oates, 2003; Sirkel, 2004; Cross, 2003). Teacher attitudes have a strong influence on the black-white scholastic performance gap and this is more pronounced when the teacher is white and the student is black. Contemporary stereotypes portray whites as well-mannered and academically superior while blacks are depicted as slothful and academically inferior. Because African American teachers and students have both been the target of this stereotyping, there is an absence of a negative stereotype of African American students from African American teachers (Oates, 2003; Sirkel, 2004; Cross, 2003). Not surprisingly, African American

and white teachers alike share positive perceptions of white students (Bobo & Zubrinsky, 1996; Steele, 1997). Findings concerning white teacher-black student relations are important because increasing numbers of African American students are finding themselves in this position (Oates, 2003).

Environmental effects

Mickelson (2003) identified multiple variables that influence the racial gap in education. One dominant explanation for the impact of these variables is that blacks and other minorities tend to reside in disadvantaged neighborhoods lacking adequate educational opportunities that will prepare them to achieve at their highest potential (Mickelson, 2003). Mickelson states that blacks are less likely to have equal access to the critical resources that contribute to greater intellectual competence.

Experiences of ethnic discrimination influence development especially during early adolescence, which is important because during this stage adolescents are at an increased risk for decreased motivation, participation in problem behaviors, and developing a negative self image (Wong, Eccles & Sameroff 2003). Group attitudes and beliefs are especially important in the social psychological development of African American youth (Swanson, Spencer, & Petersen, 1998). One's sense of self is strongly influenced by interactions with the social environment (Swanson et al., 1998). Minority youth are more likely than whites to accept perceptions of limited access due to social barriers than to challenge them to explore additional options. Minorities do little to look beyond their perceived limitations; instead, they accept them. Many judicial rulings support discrimination as illegal and unconstitutional. Nevertheless, personal experiences of discrimination continue to be a part of everyday life. The cooperative effect of these experiences can lead to denied personal efficacy leading to low educational and occupational aspirations (Swanson et al., 1998). In a society where race matters, it is immensely important to develop a positive racial self-identity (Mickelson, 2003). One's racial self-identity is an accumulation of how others identify a person's race and how that person sees their own racial identity.

Employment

Regardless of recent gains in public policy, blacks still are twice as likely to be unemployed than whites (Brown et al., 2003). Inherent character flaws and negligent life choices are reasons used to explain why blacks more than whites tend to be unemployed. Stephen and Abigail Thernstrom (1997) identify the deceptive nature of poverty and employment statistics for blacks and whites. They argue that the recent changes which have occurred regarding prejudice and discrimination are more significant and encouraging than many may want to admit. They believe modern-day allegations of racism are merely excuses used to hide the very evident failure of blacks to put forth the proper effort to succeed. Unlike the Thernstroms, Brown et al. (2003) argue that labor market discrimination and deep-rooted residential segregation limit the opportunities available to blacks. They suggest that spatial mismatch theory explains the reasons for racial differences in employment. One major reason for racial differences in employment, according to spatial mismatch theory, is the incongruity between the location of people and jobs (Brown et al, 2003; Massey & Denton, 1993). African Americans are living in one area while job opportunities are located elsewhere. This mismatch is a result of various factors including the relocation of jobs from the inner-city to the suburbs. During the 1940's-1980's moving to the inner-city was an economically sound decision because

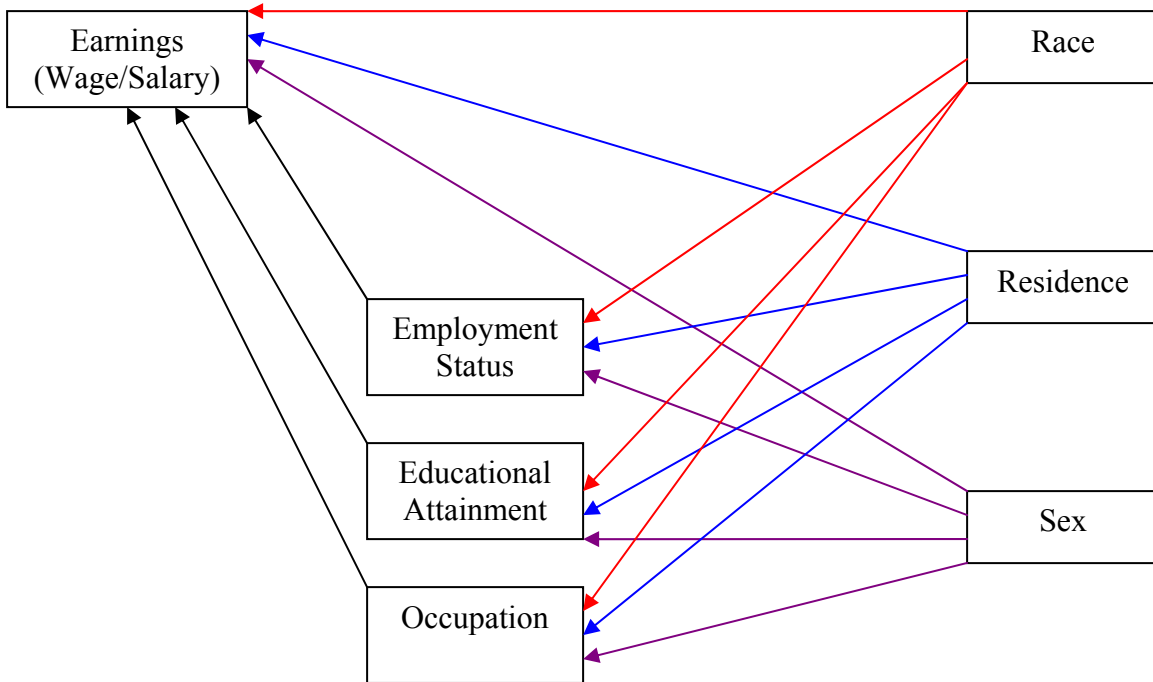
of the abundance of job opportunities during this time; often these were good paying blue-collar jobs, but as time went on these companies struggled to keep up with the global economic changes. Many of these companies (i.e. automobile manufacturers, business firms, etc.) folded and relocated elsewhere. Many companies considered the inner-city threatening due to excessive amounts of crime; therefore, companies along with the white community relocated to the suburbs creating a depressed job market for African Americans (Brown et al, 2003; Massey & Denton, 1993). According to Massey and Denton (1993), this separation of work and people created black ghettos. Massey and Denton (1993) argue that the residential segregation blacks experience cannot be compared to the limited and short-lived residential segregation experienced by other ethnic groups. No other group in America has encountered such a tenacious form of hypersegregation. Contrary to the position of Stephen and Abigail Thernstrom (1997), Massey and Denton (1993) do not identify market forces as the major cause of residential segregation. Instead they argue that intentional institutional practices by whites to contain a growing black population and limit upward mobility for blacks and other minorities are responsible for this form of segregation, similar to the apartheid system in South Africa. This practice relegates many to a life of poverty, inadequate schooling, and exposure to delinquency and crime (Massey & Denton, 1993).

The differences between blacks and whites are also echoed in occupational attainment. Ricketts and Gaul (2004) found that, 88.8% of all dentists were white and only 1.5% were black; of physicians/ medical doctors 73.1% were white and 5.5% were black; 75.9% of pharmacists were white while 6.2% were black. According to Rickett & Gaul, all health professions have fallen short of equal representation of minorities in the U.S. An even greater difference is seen in Physician Assistants where 88.2% were white and a mere 2% were black. In the legal profession, of the one million plus lawyers in the United States only 33,900 are black (U.S. Census Bureau, 2000). Even fewer blacks are represented in corporate law firms; a projected 2.4% of all lawyers in corporate firms are black, and just over one percent of them are partners (Wilkins & Gulati, 1996). Of postsecondary education faculty, blacks make up only 3% of full professors at 4-year institutions and 5% of full professors at 2-year institutions (Perna, 2001). A decrease in blacks is apparent as the occupational prestige and financial gains increase.

Hypotheses

Income differences among blacks and whites are a multifaceted and perplexing issue to resolve. Research implies that social systems contribute to the limitations faced by African Americans. A perpetual cycle is found; from an early age schools communicate to ethnic minorities that they are inferior (Oates, 2003; Sirkel, 2004; Cross, 2003; Graybill, 1997). This message, in turn, hinders their academic development as does the poor quality of education frequently provided in predominantly black schools.

Existing studies point to education, employment status, and housing segregation as important variables contributing to black's lower average income (Jaret et al., 2003; Massey & Denton, 1993). The present study hypothesizes that educational attainment, occupation, and employment status are powerful predictors that explain the income gap between blacks and whites. As a persistent factor, it is predicted that race will not only have a direct impact on the earnings differentials between blacks and whites; it is also expected to have an indirect effect on the earnings disparity through employment status, occupation and educational achievement. This hypothesis is demonstrated in Figure 1.



Data and Variables

Data is drawn from *U.S. Department of Commerce, Bureau of Census. Census of Population and Housing, 2000 [United States]: Public Use Microdata Sample: 5-Percent Sample [Computer file]* from Georgia. The analyzed dataset includes U.S. citizens 17 to 65 years of age.

The major dependent variable is earnings which includes earned wages and salary as well as self-employment income. The variable does not include social security, stock, welfare, child support and other forms of income that does not come from performing a job including self-employment. The major independent variables include race which is restricted to blacks and whites, education measured in years of schooling, a few dummy variables including unemployment, occupation, and type of residence that includes dwellings for less than \$250 of rent and property with a value of less than \$20,000 versus all other dwellings. Control variables include age, sex, marital status, employment sector, and number of work hours. Tables 1 and 2 provide basic information about the major independent variables relative to earnings.

Data Analysis Scheme

Ordinary least square (OLS) regression is used to disentangle the effect of the independent variables on earnings. A two equation regression model is applied to test the direct and indirect effects of race on earnings. A separate statistical model is used to deal with each of the three intermediate variables, years of schooling, occupation, and unemployment. The indirect effect of race through education is measured in years of schooling and is tested by the following set of equations:

$$Y = b_0 + b_1 X_1 + b_i X_i + e \tag{1}$$

$$Y = b_0 + b_i X_i + e \tag{2}$$

$$X_1 = b_0 + b_i X_i + e \quad (3)$$

Equation 1 is the structural-form equation for earnings. Equation 2 is the reduced-form equation for earnings. Equation 3 is the structural-form equation for education. X_1 is years of schooling. X_i represents other independent variables, which only include race, residence, and sex, as chronological considerations would not allow education to serve as an intermediate variable for other independent variables. The indirect effect of race through unemployment is tested by the following set of equations:

$$Y = b_0 + b_1 X_1 + b_i X_i + e \quad (4)$$

$$Y = b_0 + b_i X_i + e \quad (5)$$

$$X_1 = \ln(\pi_i / 1 - \pi_i) = b_0 + b_i X_i + e \quad (6)$$

Equation 4 is the structural-form equation for earnings. Equation 5 is the reduced-form equation for earnings. Equation 6 is the structural-form equation for unemployment. X_1 is unemployment and X_i represents other independent variables. The list is also short that include the same variables race, residence, and sex. As unemployment is a categorical variable, a binary logistic regression is used in place of an OLS regression for this equation.

Equations 4, 5 and 6 may also be used to test the hypotheses about occupation as an intermediate variable. Equation 4 is still the structural-form equation for earnings; equation 5 the reduced-form equation for earnings; and equation 6 the structural-form equation for occupation.

Results

The analysis shows that African Americans make 63 percent of the earnings of whites, similar to Jaret et al's (2003) finding about the 1999 disparity of 64 percent for a national sample. However, the OLS regression with the present control variables shows that race accounts for only about \$1,093 more in income for whites (Table 5). The \$11,086 gap in black and white mean incomes suggests that the difference of about \$10,000 would have to be accounted for by other variables. Almost all other variables, except sex, represent achieved status or behavioral conditions. Moreover, there are practically no other variables that could be further specified to significantly account for the earnings differences between blacks and whites besides the variables already specified in the model in Table 5. Therefore, the difference in earnings statistically accounted for by these variables may be viewed as including some indirect effect of race. Interactions of race and education, race and unemployment, and race and occupation are examined to estimate the different effects of these variables by race on earnings. A two-equation model is then used to test the direct effect of race on earnings and the indirect effects of race through employment status, education, and occupation.

Table 3 and table 4 show the different effects of education, occupation, employment, and gender on earnings for blacks and whites. Education has a greater return for whites than blacks. Holding a professional, technical, or managerial occupation enables whites to make substantially more than it does blacks. Being unemployed is related to a smaller loss in earnings for whites than for blacks. There is a much larger gap in earnings between white males and females than between black males and females.

The analysis confirms the hypothesis that race has a direct as well as an indirect effect on earnings through education. Table 6 provides results of a two-equation model that tests the indirect effect of race on earnings through education. All the variables are

highly significant. Being white is positively related to years of schooling (model 3 in Table 6), which in turn is positively related to earnings (model 1 in Table 6). It must be acknowledged that this model has minimum controls due to the fact that very few variables can be specified in the Census data that can justifiably serve as independent variables to years of schooling. Most variables that could conceptually otherwise serve this purpose represent measures that can occur in people's lives only after years of education is completed. This lack of controls is responsible for the low R square values.

Table 7 shows the indirect effect of race through employment status. Again, all variables have high statistical significance. Being black is positively related to unemployment (model 3 in Table 7), which in turn is positively related to earnings (model 1 in Table 7). This model also has minimum control for similar reasons and that accounts for the low R square for the model. Table 8 demonstrates the indirect effect of race through occupation. High statistical significance is also shown in this table. Again, being black is positively related to occupation (model 3 in Table 8), which in turn is positively related to earnings (model 1 in Table 8).

The analysis also shows that poor residence is strongly related to low income (Table 5). It should be acknowledged that the residence variable used in the analysis reflects only low rent and low property value. Although it is closely related to segregated residential areas, it is only a proxy variable, not a direct measure of residence segregation. Besides, the relationship between residence and income is not a strictly one-way relationship. For that reason, the modeled relationship should be evaluated with care.

The small difference in years of education between whites and blacks may seem inadequate, as an intermediate variable, to account for the more substantial difference in earnings by race. However, the interaction effects shown in table 3 and table 4 help to decipher the "mystery" – not only is there a direct and indirect effect of race through education on earnings, but the benefits of education is much greater for whites than for blacks.

Some control variables have a significant effect on income. The analysis shows that employees in private industries on average make about \$1,500 less than the self-employed but over \$3,000 more than those employed in the government sector (Table 5). Given African Americans are overrepresented in the government sector; there may be an indirect relationship between race and income through the sector of employment.

Gender, marital status, and occupation contribute to significant differences in earnings (Table 5). Females make significantly less than males. Those who are married along with those who are divorced make more than the never married. Those who are divorced seem to make significantly less than those in all the other categories. Those in professional, technical and managerial occupations earn much more than the other occupation holders.

Discussion and Conclusion

The findings demonstrate that race is still a factor in determining economic success. These results are not surprising and they support a plethora of research that racial inequality does exist. The analysis confirms the repeatedly supported hypothesis that whites make more money than blacks as a direct effect of race. More specifically, the findings show that education, occupation, and employment serve as intermediate determinants that help cause this inequality. The findings do not contradict the many studies that have been done on race relations and their impact on social and institutional

factors. The above findings describe the underlying forces that cause disparities in income between blacks and whites. The findings about the strong effect of occupation on earnings, inspected with the lower representation of African Americans in high earning occupation categories, suggest that there is an indirect effect of race on earnings through occupation.

The analysis suggests that our economy is constructed in ways that hinder African American success and that these ways may not be easy to detect. By limiting black educational attainment and hindering their employment, society restricts blacks from gaining parity with whites. Although the analysis shows that race in and of itself affects income to a limited extent, it does demonstrate that race affects other major predictors of income. These indirect effects may be even more detrimental because they are not easily detected and they make institutional changes more difficult to administer. These findings imply a deeply embedded problem that is detrimental to economic gain for African Americans and beneficial to whites. Because of the damaging effects of institutional barriers for African Americans, some political recommendations need to be taken into consideration.

Policy Implications

Race is still an indicator of an individual's position in society, specifically in the economic system. Race has long been associated with inequality and in order to remedy this social problem, major institutional change has to take place. First, equal educational opportunities along with equal housing opportunities must be implemented. Many minorities are forced and subsequently choose to live in neighborhoods that are not instrumental to the development and growth of their youth. These two issues are inextricably intertwined together and for that reason cannot be addressed separately. American society has constructed an educational system where the rich get smarter and poor get dumber, suggesting that the so-called "good" neighborhoods have the best schools and teachers, while the so-called "bad" neighborhoods have poor schools and the least qualified instructors. Because more blacks than whites live in poorer neighborhoods, they do not receive the firm educational foundation needed to flourish academically; therefore, schools should be equally funded regardless of the neighborhood they are in. To cure this predicament according to Dreier et al. (2001: p.217) "Metropolitan-wide tax-base sharing would help reduce the gap in school spending." If this is to work there has to be a national and local effort to enforce it.

Employment as indicated above also poses the greatest threat to black-white income equality. Many blacks are systematically kept out of many occupations or they encounter a glass ceiling that prohibits them from reaching the upper echelons of economic society. As a result, more often than not poverty becomes inherited because our system is set up where the "rich get richer and the poor get poorer." Therefore, while I agree with Jaret et al. (2003) and other researchers, that increasing the minimum wage and making public transit better will help, as the lower income for African Americans is a combined result of several institutional variables, increasing the minimum wage will only alleviate but not solve the problem. Evidence suggests that pay rates in some industries are higher in the suburbs than cities, but due to the lack of good public transit in suburban areas, many minorities are prevented from taking advantage of these opportunities (Ihlanfelt & Sjoquist, 1998; Ihlanfelt & Young, 1994). Therefore, adding better public transit to and in the suburbs will open the doors of success to more minorities.

Colquitt: The Indirect Effect

According to Brown et al. (2003) and Conley (1999), wealth is an issue that contributes greatly to racial economic disparities. They propose the radical idea of redistributing assets. Recently arguments of paying reparations to blacks has surfaced, but Brown et al. see wealth redistribution to be more helpful since it is wealth that predicts success in their study. A tax on wealth would be the method used to attain the financial backing needed for such a drastic solution. Since many attain their source of wealth through home ownership, housing discrimination must be eliminated. According to Conley (1999), the fact remains that wealth begets wealth and without drastic policy interventions the black-white asset gap will continue to widen and produce inequality. This approach will counter the legacy of discrimination that continues to prevent African Americans from achieving equality of condition.

Any attempt to solve this extensive problem will have to be aimed at tackling the institutional arrangement of society. Such societal changes will have to be enforced by cooperation of federal, state and local entities. Political will is the key element needed to spearhead change. For the present time, an increase in the minimum wage will help close the income gap between blacks and whites to a limited degree. Future research should analyze the effect of type of education on income differences. Looking closely to the difference in income between individuals who attend Ivy League schools as opposed to community colleges or state universities will help researcher gain added insight into income differences between blacks and whites. Future researchers should also analyze the indirect effect of race on income through the channels of education, occupation and employment status for states other than Georgia in order to see how these effects play out all over the United States.

References

- African Americans by the Numbers (2003) from the U.S. Census Bureau. Retrieved February 27, 2005, from www.infoplease.com/spot/bhmcensus1.html
- Bobo, L., & Zubrinsky, C. L. (1996). Attitudes on residential integration: Perceived status differences, mere in-group preference, or racial prejudice? *Social Forces*, 74, 883-909.
- Brown, M. K., Carnoy, M., Currie, E., Duster, T., Oppenheimer, D. B., Shultz, M., & Wellman, D. (2003). *Whitewashing race: The myth of a color-blind society*. Los Angeles: University of California Press.
- Campbell, D. B. & Fleming J. (2000). Fear of success, racial identity and academic achievement in black male college students. *Community Review*, 22, 5-18.
- Conley, D. (1999). *Being black living in the red: Race, wealth, and social policy in America*. Berkeley: University of California Press.
- Cross, B. E. (2003). Learning or learning racism: Transferring teacher education curriculum to classroom practices. *The Urban Review*, 42, 203.
- Dreier, P., J. Mollenkopf, and T. Swanstrom. (2001). *Place matters: Metropolitan for the twenty-first century*. Kansas: University Press of Kansas.
- Dubois, D. L., Burk-Braxton, C., Swenson, L. P., Tevendale, H. D. & Hardesty, J. L. (2002). Race and gender influences on adjustment in early adolescence: investigation of an integrative model. *Child Development*, 73, 5.
- Ford, D. Y. (1998). The under-representation of minority students in gifted education: Problems and promises in recruitment and retention. *Journal of Special*

- Education*, 32, 4-14.
- Graybill, S. W. (1997). Questions of race and culture: how they relate to the classroom for African American students. *The Clearing House*, 70, 6.
- Hertz, T. (2005). Rags, riches, and race: The intergenerational economic mobility of black and white families in the United States. In S. Bowles, H. Gintis, & M. O. Groves (Eds.). (2005). *Unequal chances: Family background and economic success*. (pp. 165-191) New York: Russell Sage Foundation.
- Ihlanfeldt, K. & Sjoquist, D. (1989). The impact of job decentralization on the economic welfare of central city blacks. *Journal of Urban Economics* 26, 110-130.
- Jaret, C., & Reid, L. & Adelman, R. (2003). Black-White income inequality and metropolitan socioeconomic structure. *Journal of Urban Affairs* 25, 305-33.
- Kao, G., & Thompson, J. S. (2003). Racial and ethnic stratification in educational achievement and attainment. *Annual Review of Sociology*, 29, 417-42.
- Massey, D. S., & Denton, N. (1993). *American apartheid: Segregation and the making of the underclass*. Cambridge: Harvard University Press.
- Mickelson, R. A. (2003). When are racial disparities in education the result of racial discrimination? A Social Science Perspective. *Teachers College Record*, 105, 6-20.
- Oates, G. L. (2003). Teacher-student racial congruence, teacher perceptions, and test performance. *Social Science Quarterly*, 84, 3.
- Perna, L. W. (2001). Sex and race differences in faculty tenure and promotion. *Research in Higher Education*, 42, 5-27.

Ricketts, T. C., & Gaul, K. (2004). Number of minority health professionals, where do we stand? *North Carolina Medical Journal*, 65, 6.

Schuman, H., Steeh, C., Bobo, L., & Krysan, M. (1997). *Racial attitudes in America*. Cambridge: Harvard Univeristy Press.

Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance [Abstract]. *American Psychologist*, 52, 613-629.

Swanson, D. P., Spencer, M. B. & Petersen, A. (1998). Identity formation in adolescence. In K. Borman and B. Schneider (Eds.). *The adolescent years: Social influences and educational challenges* (pp. 210-226). Chicago, IL: The National Society for the Study of Education.

Thernstrom, S., & Thernstrom, A. (1997). *America in black and white: One nation, indivisible*. New York: Simon & Schuster.

Wilkins, D. B., & Gulati, G. M. (1996). Why are there so few black lawyers in corporate law firms? An Institutional Analysis. *California Law Review*, 84, 493-624.

Wong, C. A., Eccles, J. S., and Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of personality*, 71, 6.

Zirkel, S. (2004). What will you think of me? Racial integration peer relationships and achievement among white students and students of color. *Journal of Social Issues* 60, 57-74.

Table 1. Mean Earnings, Years of Education, and Yearly Work Hours for Blacks and Whites Age 17 to 65 in Georgia

	Black		White	
	Mean	s.d.	Mean	s.d.
Earnings	18,553	26,107	29,639	41,139
Education	14.8	1.5	15.3	1.7
Hours	1,344	1,017	1,528	1,037

Table 2. Summary Profiles for Blacks and Whites Age 17 to 65 in Georgia

	Black		White	
	Freq.	Percent	Freq.	Percent
<i>Residence*</i>				
Poor	8,319	31.7%	5,720	18.2%
Not Poor	17,963	68.3%	25,689	81.8%
<i>Unemployment**</i>				
Layoff	1,231	1.8%	1,074	0.6%
Absence	1,229	1.8%	1,922	1.2%
Recall	1,738	2.5%	1,916	1.2%
Looking	4,997	7.3%	4,683	2.8%
Could Work	5,470	7.9%	7,737	4.6%
<i>Employment Sector</i>				
Private	43,992	63.8%	108,716	65.3%
Government	11,862	17.2%	23,836	14.3%
Self-Employed	2,754	4.0%	15,693	9.4%
<i>Occupation</i>				
Professional	5,613	10.7%	27,607	21.9%
Service	11,981	22.8%	17,116	13.6%
Sales	14,348	27.3%	41,380	32.9%
Farm	531	1.0%	868	0.7%
Blue Collar***	5,164	9.8%	17,349	13.8%
Transportation	14,507	27.6%	20,657	16.4%
Military	393	0.7%	914	0.7%
<i>Marital Status</i>				
Married	27,133	39.4%	108,914	65.4%
Widowed	2,266	3.3%	3,462	2.1%
Divorced	8,757	12.7%	20,173	12.1%
Separated	4,020	5.8%	2,468	1.5%
Never Married	26,733	38.8%	31,425	18.9%

Note: * Dwellings with rent less than \$250 a month or a value of less than \$20,000.

** Layoff – on layoff from a job; Absence – temporarily absent from a job or business; Recall – has been informed to return to work in the next 6 months; Looking – has been looking for work in the last 4 weeks; Could Work – could have started a job if offered one last week.

*** Including construction, maintenance, and extraction industry occupations.

Colquitt: The Indirect Effect

Table 3. OLS Models of Interaction Effects for Race by other Variables on Earnings

White*Education	2932***	----	----	----
White*Professional	----	4899***	----	----
White*Employment	----	----	-6216**	----
White*Female	----	----	----	-14497***
White	-40476***	1585***	4349***	11930***
Female	-17055***	-15684***	-14792***	-5918***
Education	3101***	5728***	5460***	5457***
Professional	(Comparison)	5453***	(Comparison)	(Comparison)
Service	-10722***	----	----	-10493***
Sales	-4602***	----	----	-4524***
Farm	-6288***	----	----	-6289***
Blue collar	-15807***	----	----	-16046***
Transportation	-12323***	----	----	-11440***
Military	-21310***	----	----	-20326***
Work Hours	18.67***	17.37***	18.43***	18.33***
Self-Employed	(Comparison)	(Comparison)	(Comparison)	(Comparison)
Government	-12557***	-17963***	-13,667***	-12526***
Private	-2436***	-6757***	-3566***	-2457***
Married	(Comparison)	(Comparison)	(Comparison)	(Comparison)
Widowed	137	310	-290	-789
Divorced	-2653***	-2807***	-3176***	-3075***
Separated	-3757***	-3708***	-4131***	-4322***
Never married	-8760***	-8753***	-9160***	-9433***
Family size	882***	846***	813***	926***
Subfamily	-2954***	-2713***	-2852***	-3482***
Intercept	-26701	-67156	-67453	-82466
R ²	0.318	0.296	0.0308	0.321

Notes: * p < 0.10. ** p < 0.05. *** p < 0.001

Table 4. Interaction Effects of Education, Occupation, Unemployment, and Gender by Race

	Black	White
Education	\$2,932	\$6,033
Professional	\$4,899	\$10,352
Unemployment	-\$6,126	-\$3,155
Female	-\$5,918	-\$20,415

Source: Calculated from Table 3.

Table 5. OLS Regression Model of Earnings

Intercept	-42,088.8
<i>Major Independent</i>	
White	1,093.5**
Education	2,440.3**
Unemployment	-935.6*
Poor Residence	-4,129.8**
<i>Employment Sector (compared with "Self-employed")</i>	
Private	-1,487.8**
Government	-4,606.4**
<i>Occupation (Compared with "Construction, maintenance and extraction")</i>	
Professional	8,707.1**
Service	414.5
Sales	3,691.2**
Farm	-4,316.6
Transportation	2,235.2**
Military	-877.4
<i>Marital Status (compared with "Never married")</i>	
Married	954.3**
Widowed	-3,099.0*
Divorced	995.7*
Separated	1,189.3
<i>Other</i>	
Work Hour	11.9**
Female	-5,889.2**
Age	317.8**
R ²	0.34

Notes: * p < 0.05; ** p < 0.01.

Table 6. Two-Equation Regression Models of Earnings and Education

Dependent Variable:	(1) Earnings	(2) Earnings	(3) Education
Intercept	-30,511.4	23,515.3	14.7
Education	4,092.3**	---	---
Poor Residence	-7,137.5**	-8,958.9**	-0.57**
White	1,590.2**	4,146.7**	0.44**
Female	-9,532.7**	-8,243.2**	-0.07**
R ²	0.116	0.075	0.041

Notes: ** p <0.01.

Table 7. Two-Equation Regression Models of Earnings and Employment

Dependent Variable:	(1) Earnings	(2) Earnings	(3) Unemployment (odds ratio in parentheses)
Intercept	24,145.1	23,515.3	-2.32
Unemployment	-6,711.3**	---	---
Poor Residence	-8,809.7**	-8,958.9**	0.27** (1.31)
White	3,842.6**	4,146.7**	-0.56** (0.57)
Female	-8,095.7**	-8,243.2**	0.28** (1.32)
R ²	0.081	0.075	

Notes: ** p <0.01.

Table 8. Two-Equation Regression Models of Earnings and Occupation

Dependent Variable:	(1) Earnings	(2) Earnings	(3) Occupation (odds ratio in parentheses)
Intercept	23,193.4	23,515.6	-1.57
Occupation	12,244.1**	---	---
Poor Residence	-5,853.0**	-8,958.9**	-1.08** (0.34)
White	2,808.1**	4,146.7**	0.59** (1.81)
Female	-8,943.3**	-8,243.2**	0.30** (1.35)
R ²	0.101	0.075	

Notes: ** p <0.01.

GENDER DIFFERENCES IN ROMANTIC JEALOUSY AMONG COLLEGE STUDENTS

Shr'i M. Davis, McNair Scholar

Dr. Jennie Dilworth, Research Mentor
Hospitality, Tourism, and Family and Consumer Sciences

Abstract

Jealousy results from a real or implied threat by a third party to an existing relationship. This study examined research on gender differences in jealousy. It took a socio-cultural and evolutionary approach to understanding the complexities of jealousy. Seventy-five undergraduate students at a southeastern university voluntarily participated in an anonymous questionnaire addressing their elicitors, effects of, and experiences with jealousy in present or previous romantic relationships. There were conflicting findings regarding gender differences in jealousy, yet some interesting trends emerged related to male and female perspectives on effects and elicitors of jealousy.

There are so many obstacles that couples must struggle to overcome in order for their relationship to survive. Some of these obstacles may include being unfaithful, lack of communication, the inability to compromise, or jealousy, just to list a few. Of those listed, jealousy can quite possibly be the most damaging to a relationship (Harris, 1992; Paul & Galloway, 1994). Most everyone experiences a visit from jealousy, the nasty green-eyed monster, at some point in their lives - whether it's over a best friend's career success or a gorgeous person flirting with their loved one. However, jealousy is very difficult to research. One of the reasons behind this is the inconsistencies with the definition. We tend to think of jealousy as a single emotion, but it is actually a mixture of many feelings (Pines & Aronson, 1983). It is a feeling of low self-worth and a fear that we are not good enough to hold on to the things that matter most to us. The first step in breaking free from jealousy's grip is recognizing the problem. Through a survey conducted nationwide among married couples, one-third of the participants stated that jealousy was a problem in their relationship (Pines, 1992).

Jealousy is a complex emotion to define and describe, which may explain why so much research has been done on the subject so far. It is important to study romantic jealousy because in its most extreme form, morbid jealousy, it can be extremely dangerous. At least 40% of college students have been the victim of some form of dating violence as a result of jealousy (Daly, Wilson & Weghorst, 1982). Jealousy happens to be the leading cause of battery and homicide and other prominent causes of violence among couples (Paul & Galloway, 1994). When ranking motives for non-accidental homicides, jealousy has consecutively ranked among the top three (Harris, 1992). Most of us are familiar with jealousy through our own personal experiences. Jealousy is an emotion that is experienced by many at some point in their lives. This study is intended to explore several hypotheses concerning romantic jealousy. It is important to

demonstrate that the sexes do experience jealousy in different ways, and it is equally important to distinguish that one sex is not more or less jealous. This distinction is important when attempting to study and analyze jealousy among couples. It is essential to avoid presenting stereotypes and biased views of one sex or another.

Jealousy has been difficult to define and analyze; it appears to be one of the most perplexing emotions because it contains both love and hate (Mullen, 1991). This is partially due to the numerous definitions given by psychologists and sociologists. At the base of jealousy is social comparison. Some define jealousy to be the reaction or set of reactions displayed when faced with a threat in a valued relationship (Clanton & Smith, 1986; Knox, Zusman, Mabon, & Shriver, 1999; Pines, 1992). Others believe jealousy to be a strategy to retain a partner (DeWeerth & Kalma, 1993; Dijkstra & Buunk, 2002). Jealousy has also been defined as the consequence of threats to self-esteem (Buss, 2000), or the result of underlying guilt feelings (Hansen, 1985). With all these definitions there is still one thing that remains the same, jealousy can be as natural as the beating of a heart. Although all experience jealousy in some form or fashion, people experience and express it in a wide range of actions. The emotions associated with jealousy may include pain, anger, rage, sadness, fear, grief, depression, humiliation, and even violence (Pines & Aronson, 1983).

As interesting as it is to study jealousy, it is equally complex. Studies are complex because researchers have to rely mostly on self-report data. You cannot tell someone to experience infidelity or jealous feelings at the snap of a finger. You cannot randomly assign individuals to be unfaithful and then record their or their partners' reactions. It is easy to say what you would or would not do in a given situation but in all honesty you may not react that way when placed in that particular situation.

Researchers worldwide have studied jealousy using a wide range of methods, such as lengthy questionnaires, one-on-one or group interviews, personal observation, seminars, and extensive reviews of past literature (McIntosh, 1989; Pines & Friedman, 1998; Symons, 1979). Conclusions to whether one sex is more or less jealous are still unclear. Numerous studies have been conducted to determine if one gender is more or less jealous than the other. Yet, these studies have yielded inconsistent results. One has found that women are more jealous than men (Buunk, 1982). Others found that men are in fact more jealous than women (Pines & Aronson, 1983; Pines & Friedman 1998). Some have found that there are no significant differences in the amount of jealousy experienced by one gender compared to the other (McIntosh, 1989; Pines & Aronson, 1983). Not only have psychologists attempted to conclude whether one gender is more jealous than the other, but jealousy in general seems to be a very popular topic to research. Researchers like Dijkstra and Buunk (2002) have researched jealousy comparing heterosexuals to homosexuals. Harris (1992) took a cross-cultural approach in her analysis of jealousy and gender triggers. Others have looked at variables such as cohabiting couples versus those that are married and other comparisons based on age, ethnicity, family background, etc.

In 1999, (Knox et al.) 185 undergraduates completed a nine-item questionnaire focusing on the presence, timing, and sources of jealousy in romantic relationships. This data revealed a significant difference between couples dating for less than a year versus those dating for over a year. The latter group was less likely to report higher levels of jealousy. The respondents identified "actually talking to a previous partner" and a

jealous nature as the most common sources of their jealous feelings. This data ultimately suggested that one's vulnerability to jealousy seemed to decrease as the duration of the relationship increased.

Hansen (1985) studied jealousy among college students by distributing 336 questionnaires examining dating jealousy. He designed five hypothetical situations to measure how the students would feel about their partner's dating behavior. The results found that jealousy acts to encourage one to expect his or her love partner to give up close personal friendships with others of the opposite sex.

Increasingly, research has concluded that jealousy is triggered differently in men and women. The evolutionary theory suggests that men typically express greater sexual jealousy while women express greater emotional jealousy (Harris, 1992; Pines & Aronson, 1983). This theory suggests biological influences are behind gender differences in jealousy (Symons, 1979). Since fertilization takes place in the female, men are more threatened by the humiliation of their mate becoming pregnant by another man and the uncertainty of his paternity. Women do not have that problem; if they are pregnant it is no doubt that the child is theirs. Women are more concerned with the loss of the resources that their mate provides (house, finances, time, father for their child, etc.). Men assume that if a female has sex with a man, then she is in love with him; whereas, women do not necessarily attach sex and love. They believe that men can have sex without being in love with a woman and want to leave them for that woman; this is why they may be more concerned with emotional attachment. If their partner has fallen in love with another woman, then women are more likely to leave their current mate (Cann, Mangum, & Wells, 2001; Shackelford et al., 2003). Jealousy is an innate and universal response according to this theory.

In accordance with the evolutionary theory, DeWeerth and Kalma (1993) surveyed 163 students who had a steady partner. Subjects were told that the questionnaire that they completed was about partner preference; however, it focused on sexual jealousy and its triggers. In this study, females scored much higher than males on "general sexual jealousy." Females were more worried about their partners investing time and resources on a rival. Males projected that they would act more aggressively. There was no gender difference in forgiveness of an unfaithful partner. Overall, there was no gender difference in the admission of experiencing sexual jealousy. Cann, Mangum, and Wells (2001) completed a study aimed at replicating previous work on this theory, where 156 participants were questioned about possible responses to sexual vs. emotional infidelity. Similar to DeWeerth and Kalma's study, when presented a forced choice between sexual or emotional infidelity, men and women differed greatly. Women were more likely to choose emotional infidelity as more distressing, whereas more men chose sexual infidelity.

Pines and Friedman (1998) found no gender differences in reported frequency, duration, and intensity of jealousy in a series of four studies conducted in the United States and Israel. In the first of the four studies, outside of finding no gender differences, they found that women's jealousy focused more on the relationship than the men's did. In the second study, after distributing the "Sexual Jealousy Inventory," they found very few gender differences in responses to positive and negative causes of jealousy, attitudes towards jealousy, and people most/least likely to provoke jealous reactions. In the third study, an emotional relationship produced just as much jealousy as a sexual relationship.

In the last study, the only significant difference that emerged was related to the experience of emotional and physical symptoms. In all of the studies, the women were more protective and committed to their present relationship, which may be explained by the evolutionary theory. McIntosh (1989) reviewed jealousy among a sample of black undergraduates and also found no significant gender differences but did find that the more secure the individual, the less jealous.

Method

Procedure & Participants

Data was obtained by distributing questionnaires to volunteers at a southeastern university. Volunteers were solicited by utilizing several different outlets: making announcements in classes, sending emails to personal address books to announce the study, using a college social website known as the Facebook to announce the study, and getting friends that qualified to participate. Questionnaires were completed individually and anonymously. Nowhere on the questionnaires were names, social security numbers, or any other identification requested. The only requirement for participation was that all participants currently be in a relationship or have experienced one within the past year. When questionnaires were distributed, a brief verbal description of the study was given. Each participant was asked to carefully read the informed consent form attached to the questionnaire. Since passive consent was obtained, participants were then instructed to detach the informed consent form and keep it for their records. After completing the questionnaire, the participants could ask questions and share their thoughts and feelings generated by the questionnaire.

Seventy-five current university students enrolled in summer courses participated in this study. In spite of efforts to obtain an approximately equal distribution of men and women participants, there were 27 (36%) men and 48 (64%) women who completed the questionnaires. To further break down these statistics, 21 (28%) were black males, 5 (6.6%) were white males, 34 (45.3%) were black females, 12 (16%) were white females, and 3 (less than 1%) were others.

Measure

A form of the Sexual Jealousy Inventory developed by Pines and Aronson (1983) was used in this research. The questionnaire in its entirety is found in Appendix A. This instrument has been used in other studies (Pines & Aronson, 1983; Pines & Friedman, 1998) and addresses the triggers, elicitors, effects, levels, experiences, focuses, and responses to jealousy. The current study focused on questions pertaining to the elicitors and effects of jealousy. Questions were posed and rated on a 7 point scale ranging from “no jealousy at all”, “moderately jealous”, “extremely jealous.” After collecting all of the questionnaires, data was analyzed using the Statistical Package for the Social Sciences (SPSS).

Results

To determine if there was a significant gender difference in jealousy, responses to question #31 “How jealous are you?” were analyzed. Possible responses to this question ranged from 1 to 7. The mean for women (4.02) was slightly higher than that for men (3.46), however there was no statistically significant difference between groups ($t = -1.47$, $p = .54$). A second question measuring personal jealousy, #32 “Do you consider yourself a jealous person?” was answered in a yes-no format. Chi square tests of independence revealed a significant gender difference in responses ($\chi^2 = 4.92$, $p < .05$).

Means for men and women were compared on the elicitors and effects of jealousy but statistical significance was not computed. The results are found in Figures 1, 2, 3, and 4 in Appendix B. The mean for female responses was slightly higher on most categories compared to the responses of males, including the following questions: “If you recently discover that your partner has been having a long-term affair,” “If you discovered your partner had a casual affair,” and “If you discovered your partner had an open affair.” For men, there were few categories where their mean was slightly higher than the women’s. For example, when asked how they would feel if they found out their mate had another lover or if their mate admired or found a movie star attractive, the mean for men was higher than for women. The mean was approximately equal for men and women in response to the question: “If you recently discovered that your mate had an old affair but it was over now.” In terms of the effects of jealousy, men thought that jealousy made their partner look more desirable, whereas women thought that jealousy made one examine one’s relationship.

Discussion

Overall, there appeared to be inconsistent findings on gender differences in romantic jealousy. When asked to rank jealousy on a 7-point scale, there was no significant difference found between men and women. However, when presenting the same question as a yes-no response, a significant difference was found. Such inconsistency prohibits making a definitive answer to the question, “Are there gender differences in the experience of jealousy?” Thus, considering inconsistencies in previous studies, it appears that further study of this question is warranted.

Similar to Pines & Friedman (1998), the intent of the current study was to compare male and female responses to the elicitors, effects, and experiences with jealousy, using the same instrument but on a different sample. There were some noteworthy similarities and differences in the findings of the current study compared to previous research with the Sexual Jealousy questionnaire.

Comparable to Pines & Friedman (1998), the women appeared to be more protective of the relationship. The women responded with more jealousy than the men to their partner’s involvement, sexual or not, with people outside of the relationship. This supports Hansen’s (1985) finding that women were more likely to request that their partner give up outside relationships, especially those with a member of the opposite sex. The women expressed jealous reactions when asked how they would feel if their partner had been having a sexual relationship outside of their relationship. The women’s mean was higher than the men’s when asked how they would feel if their partner had fallen in love with someone else.

Identical to Cann et al. (2001), men reported more jealousy if they found out that their mate had another lover. The men felt that jealousy made their partner look more desirable. The men expressed more jealousy towards their partner showing appreciation or interest in a movie star. Both sexes scored similarly to the discovery of an old discontinued affair. These findings seem to support the theory that women’s jealousy focuses on the potential loss of resources, or emotional attachment; whereas, men’s jealousy is focused on their own masculinity or on concerns about their mate’s sexual fidelity (Harris, 1992).

This research had several limitations that could have altered the results. Most noteworthy was the characteristics of the sample used. Due to time and resource

restrictions, a convenience sample was used. Utilizing a random sample would have likely yielded different results. Also important to note is the sample size: it lacked an equal distribution of men and women. Using other age groups, or drawing students from other universities, might have generated different results. In the future, researchers should look at cross-cultural jealousy. They can possibly do so by conducting identical experiments at two completely different locations. It is recommended that observation rather than self-report data be collected as well. If self-report is used, perhaps another instrument may yield clearer findings.

References

- Buss, D.M. (2000). *The Dangerous Passion: Why Jealousy Is as Necessary as Love and Sex*. New York, NY: Simon and Schuster.
- Buunk, B. (1982). Strategies of jealousy: Styles of coping with extra marital involvement of the spouse. *Family Relations*, 31, 13-18.
- Cann, A., Mangum, J. L., & Wells, M. (2001). Distress in response to relationship infidelity: The roles of gender and attitudes about relationships. *Journal of Sex Research*, 38, 285-191.
- Clanton, G., & Smith, L.G. (1986). *Jealousy*. Lanham, MD: University Press of America.
- Daly, M., Wilson, M., & Weghorst, S.J. (1982). Male sexual jealousy. *Ethology and Sociobiology*, 3, 11-27.
- De Weerth, C., & Kalma, A.P. (1993). Female aggression as a response to sexual jealousy: A sex role reversal? *Aggressive Behavior*, 19, 265-279.
- Dijkstra, P., & Buunk, B. P. (2002). Sex differences in the jealousy-evoking effect of rival characteristics. *European Journal of Social Psychology*, 32, 829-852.
- Hansen, G.L. (1982). Reactions to a hypothetical jealousy producing events. *Family Relations*, 31, 513-518.
- Hansen, G.L. (1985) Dating jealousy among college students. *Sex Roles*, 12, 713-721.
- Harris, C.R. (1992). The evolution of jealousy. *American Scientist*, 92, 62-71.
- Harris, C. R. (2003). A review of sex differences in sexual jealousy, including self-report data, psychophysiological responses, interpersonal violence, and morbid jealousy. *Personality & Social Psychology Review*, 7, 102-129.
- Harris, C. R., & Christenfeld, N. (1996). Gender, jealousy, and reason. *Psychological Science*, 7, 364-366.
- Knox, D., Zusman, M. E., Mabon, L., & Shriver, L. (1999). Jealousy in college student relationships. *College Student Journal*, 33, 328-330.
- McIntosh, E.G. (1989). An investigation of romantic jealousy among black undergraduates. *Social Behavior and Personality*, 17, 135-141.
- Mullen, P. E. (1991). The pathology of passion. *British Journal of Psychiatry*, 158, 593-601.

- Paul, L., & Galloway, J. (1994). Sexual jealousy: Gender differences in response to partner and rival. *Aggressive Behavior*, 20, 203-211.
- Pines, A.M. (1992). *Romantic jealousy: Understanding and conquering the shadow of love*. New York, NY: St. Martin's.
- Pines, A. M., & Friedman, A. (1998). Gender differences in romantic jealousy. *Journal of Social Psychology*, 138, 54-72
- Pines A., and Aronson E. (1983). Antecedents, correlates, and consequences of sexual jealousy. *Journal of Personality*, 51,108-136.
- Shackelford T.K., Voracek, M., Schmitt, D.P, Buss,D.M., Weekes-Shackelford,V.A., & Michalski, R.L. (2003). Romantic jealousy in early adulthood and in later life. *Human Nature*, 15, 283-300.
- Symons, D. (1979). *The evolution of human sexuality*. New York, NY: Oxford University Press.

APPENDIX A

Questionnaire

*In order to complete this questionnaire, you must be in a current relationship or have experienced one within the past year. Please **DO NOT** put your name or any identifying information on this questionnaire. If you feel uncomfortable at any time while completing this questionnaire, you may choose to withdraw your participation at any point. Please circle the response that fits best unless otherwise indicated.*

Please respond to all questions **TRUTHFULLY**.

Sex: _____

Age: _____

Race: Asian ____ Black ____ Hispanic ____ White ____ Other ____

1. How would you describe your physical condition?
1 2 3 4 5 6 7
terrible average excellent

2. How would you describe your emotional condition?
1 2 3 4 5 6 7
terrible average excellent

3. How do you feel about life in general?
1 2 3 4 5 6 7
dissatisfied average very satisfied

4. How do you feel about yourself in general?
1 2 3 4 5 6 7
terrible average great

5. How do you feel about your looks in general?
1 2 3 4 5 6 7
terrible average great

6. How do you feel about your general desirability as a sexual partner?
1 2 3 4 5 6 7
very dissatisfied average very satisfied

Answer the following questions regarding your current or most recent relationship.

7. Are you currently in an intimate relationship?
a. yes b. no

8. How long, in years and months, have/had you been with your partner? _____ years
 _____ months

9. How long do/did you expect the relationship to last?

1	2	3	4	5	6	7
Short time			several years		forever	

10. How would you describe the relationship?

1	2	3	4	5	6	7
bad			mixed or average		excellent	

11. Who has/had the control in the relationship?

1	2	3	4	5	6	7
your partner			equal control		you	

12. How secure do/did you feel about the relationship?

1	2	3	4	5	6	7
very insecure			moderately secure		very secure	

13. How do/did you feel about your partner in general?

1	2	3	4	5	6	7
very dissatisfied			average or ambivalent		very satisfied	

14. How physically attracted are/were you to your partner?

1	2	3	4	5	6	7
not at all			moderately		very	

15. How emotionally attracted are/were you to your partner?

1	2	3	4	5	6	7
not at all			moderately		very	

16. How sexually desirable do you feel your partner is/was?

1	2	3	4	5	6	7
not at all			moderately		very	

17. If you found someone else, would you leave your partner?

1	2	3	4	5	6	7
definitely not			possibly		definitely	

18. Do you believe in monogamous (one-on-one) relationships for yourself?

1	2	3	4	5	6	7
definitely not			to a certain degree		definitely	

19. Have you ever been sexual with someone else while in the relationship?

1	2	3	4	5	6	7
never			a few times		all the time	

Davis: Gender Differences

20. If, so did your partner know about it? a. yes b. no
21. If yes, how did your partner respond?
 1 2 3 4 5 6 7
 badly mixed very well
22. Have you ever been unfaithful to your partner in any other way?
 1 2 3 4 5 6 7
 never a few times all the time
23. Has your partner ever been sexual with someone else while in the relationship with you?
 1 2 3 4 5 6 7
 never a few times all the time
24. If so, how did you feel about it?
 1 2 3 4 5 6 7
 bad mixed good
25. Has your partner ever been unfaithful to you in any other way?
 1 2 3 4 5 6 7
 never a few times all the time
26. Would you be (or were you) open with your partner about other sexual experiences?
 1 2 3 4 5 6 7
 definitely not to a certain degree definitely
27. Would your partner be (or was your partner) open with you about other sexual experiences?
 1 2 3 4 5 6 7
 definitely not to a certain degree definitely
28. How jealous is your partner?
 1 2 3 4 5 6 7
 not at all moderately extremely
29. To what extent is jealousy a problem in your relationship?
 1 2 3 4 5 6 7
 not at all moderately extremely
30. How often has jealousy been a problem in previous relationships you had?
 1 2 3 4 5 6 7
 never a few times always

- a. Had another Lover? _____
- b. Had a close friend of your sex who was single and eligible? _____
- c. Had a close friend of your sex? _____
- d. Was friendly with single and eligible people? _____
- e. Expressed appreciation of, and interest in, someone s/he knows casually? _____
- f. Expressed appreciation of an attractive stranger passing by? _____
- g. Expressed appreciation of a movie or television star? _____

39. How much jealousy would you experience if your partner...

- a. announced s/he had fallen in love with someone else and was thinking about leaving you? _____
- b. had a serious long-term affair? _____
- c. had an affair, but was open about it and assured you it was caused by a need for variety that in no way would affect your relationship? _____
- d. was open to, and frequently had, casual sexual experiences? _____
- e. recently had a casual one night affair? _____
- f. had a love affair many years ago, before being partnered with you? _____

40. How much jealousy would you experience if you discovered that your partner was having a love affair and...

- a. was extremely indiscreet about it; a scandal erupts, and you hear about it when you are alone; everybody else but you has known about it for a long time. _____
- b. was extremely indiscreet about it; a scandal erupts in the middle of a big party and you are there. _____
- c. your mate is very discreet, but knows you know. _____
- d. everyone but you has known about it for a long time, but no one has said anything. _____
- e. only you and a few close and trusted friends know about it. _____

Recalling your most extreme experience of jealousy, to what extent did you experience each one of the following physical and emotional reactions? Please use the following scale to respond to all items.

- | | | | | | | |
|-------------------------------|---|---|------------|------------------------|---|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| not at all | | | moderately | | | extremely |
| a. heat _____ | | b. headaches _____ | | c. shakiness _____ | | |
| d. empty stomach _____ | | e. shortness of breath _____ | | f. blood rushing _____ | | |
| g. high energy _____ | | h. coldness _____ | | i. fainting _____ | | |
| j. nausea _____ | | k. cramps _____ | | l. nightmares _____ | | |
| m. exhaustion _____ | | n. dizziness _____ | | o. no appetite _____ | | |
| p. hands/legs trembling _____ | | r. fast heart _____ | | s. insomnia _____ | | |
| t. sexual arousal _____ | | u. feeling of impending nervous breakdown | | | | |

How have you coped with jealousy? Please use the following scale to respond to all items:

- | | | | | | | |
|-------|------|--------|--------------|-------|---------|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Never | Once | Rarely | Occasionally | Often | Usually | Always |

- a. rational discussion ____ b. screaming ____ c. avoiding the issue ____
d. "stony silence" ____ e. crying ____ f. physical violence ____
g. suffer silently/covertly ____ h. sarcasm ____ i. acceptance ____
j. throwing things ____ k. denial ____ l. retaliating ____
m. leaving partner ____ n. suffers silently/visible ____ o. make joke of it ____

42. Do you consider your jealousy a problem?

1 2 3 4 5 6 7
not at all moderately so very much so

43. Do you like being jealous?

1 2 3 4 5 6 7
not at all moderately so very much so

44. If you could get rid of your jealousy completely, would you like to?

1 2 3 4 5 6 7
definitely no not sure definitely yes

45. Do you like your partner to be jealous?

1 2 3 4 5 6 7
definitely no not sure definitely yes

46. Do you think jealousy is a normal response in certain situations?

1 2 3 4 5 6 7
definitely no somewhat definitely yes

47. How desirable do you think jealousy is as a personal characteristic?

1 2 3 4 5 6 7
undesirable mixed desirable

48. Can you make yourself stop being jealous?

1 2 3 4 5 6 7
definitely not to a certain degree definitely

Please use the following scale to rate some of the effects of jealousy:

1 2 3 4 5 6 7
definitely no to a certain degree definitely

Positive Effects of jealousy:

- a. Teaches people not to take each other for granted. ____
b. Makes relationships last longer. ____
c. A sign of love. ____
d. Makes partners look more desirable. ____
e. Makes one examine one's relationship. ____
f. Brings excitement to listless relationship. ____
g. Instrument for inducing commitment. ____

Negative Effects of jealousy:

- a. Causes emotional distress. ____
- b. Puts a strain on the relationship. ____
- c. Wastes time. ____
- d. Can cause social embarrassment. ____
- e. May result in violence. ____
- f. Drives one's partner away. ____
- g. Makes one feel guilty. ____

49. Have you ever been the object of someone's jealousy?

1	2	3	4	5	6	7
never			a few times			all the time

50. Did you like the experience?

1	2	3	4	5	6	7
not at all				somewhat		very
much						

51. What do you think causes people in general to experience jealousy? Please use the following scale to rate all items:

1	2	3	4	5	6	7
definitely not			to a certain degree			definitely

- a. Instinctive reaction to threat. ____
- b. Normal reaction accompanying love. ____
- c. Wards off infidelity impulses. ____
- d. Self-blame. ____
- e. Immaturity and a defective self. ____
- f. Result of Personal Insecurity. ____
- g. Result of Weakness in the relationship. ____
- h. Result of feeling excluded. ____
- i. Fear of losing Control. ____
- j. Result of childhood deprivation. ____

52. After answering this questionnaire, what is your own definition of jealousy?

53. Using your own definition, how jealous are you?

1	2	3	4	5	6	7
no jealousy			moderately		extreme jealousy	
at all			jealous			

APPENDIX B

Figure 1. Means for questions 36e, 37d, 37f, 38a

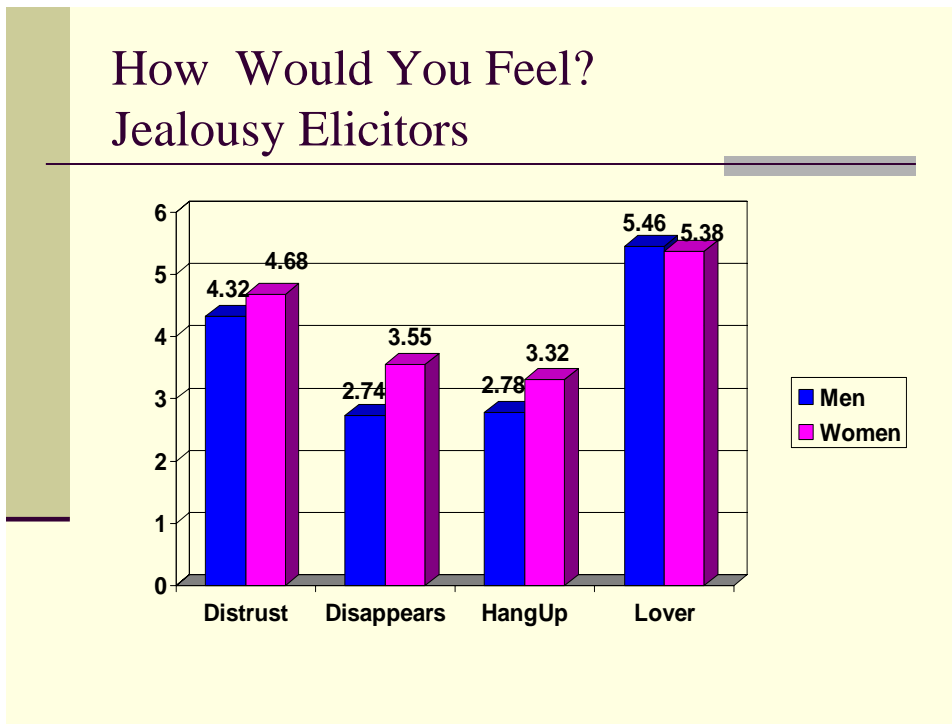


Figure 2. Means for questions 38b, 38g, 39a, 39e

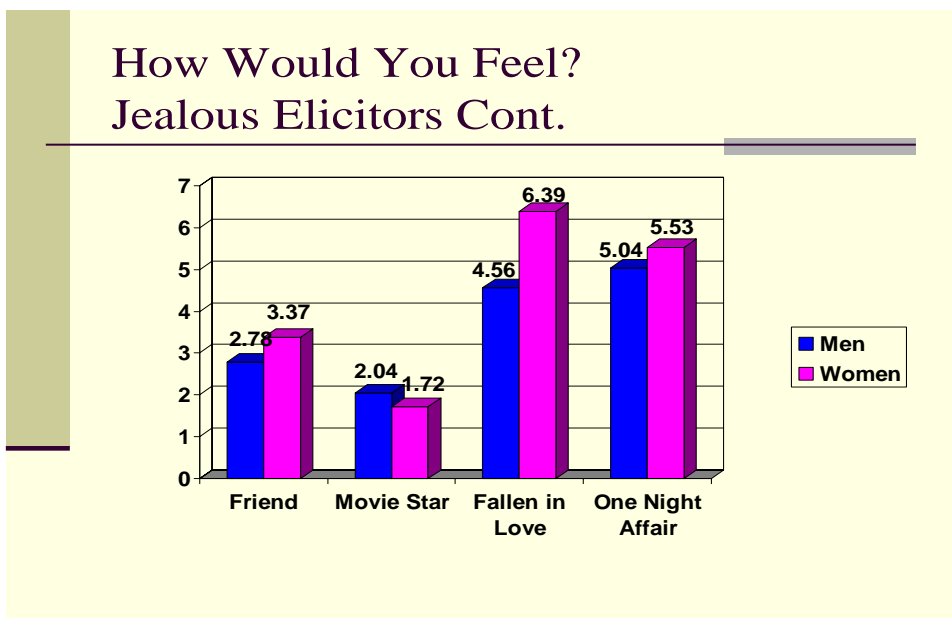


Figure 3. Means for questions 39b, 39c, 39d, 39f

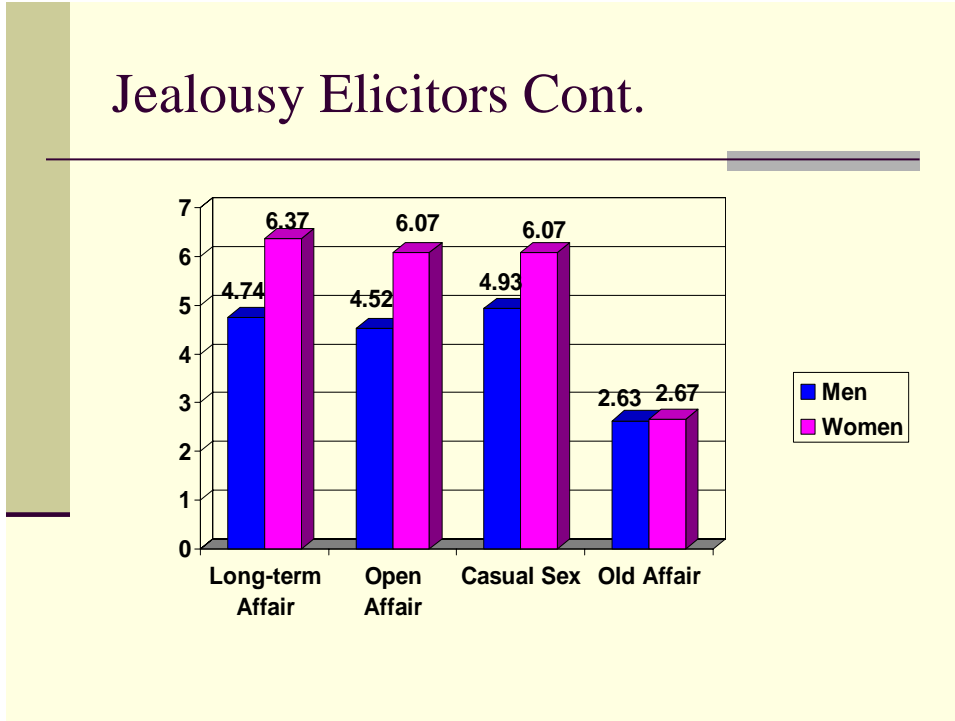
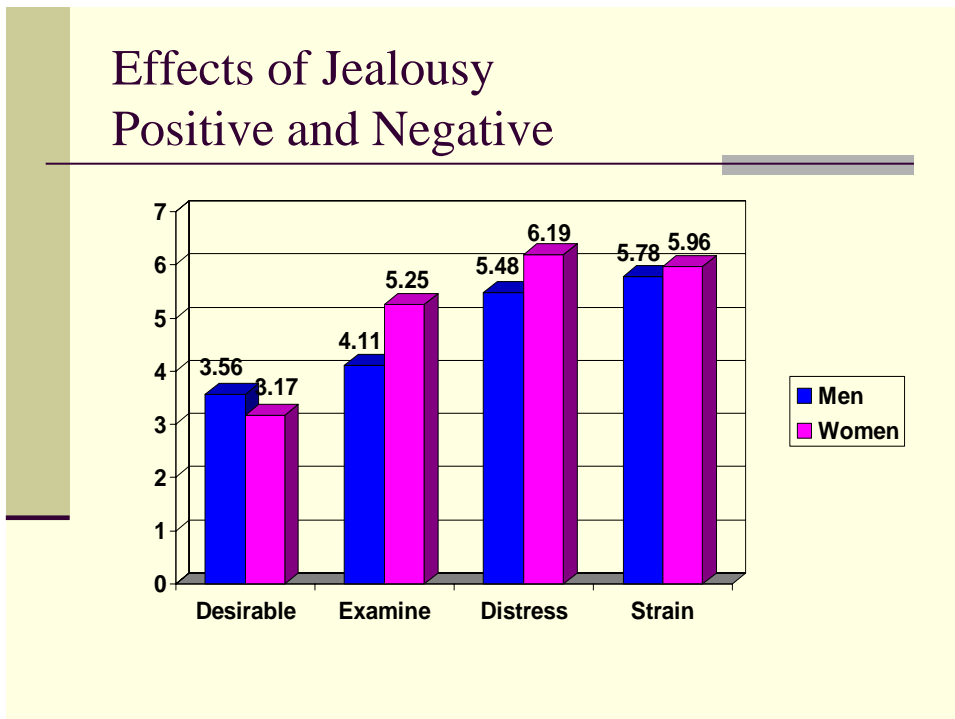


Figure 4. Means for questions Pos.D, Pos.E, Neg.A, Neg.B



THE VARIABLE EFFECTIVENESS OF TELEVISION COMMERCIAL APPROACHES ON GENDER AND ETHNIC SEGMENTS OF 18-25 YEAR-OLD DEMOGRAPHIC AUDIENCE

Funmi Dosunmu, McNair Scholar

Mr. Mark Mohr, Research Mentor
Department of Communication Arts

Abstract

This study examines the effectiveness of five different types of advertising approaches of television commercials. The study will test the concept of gender and ethnicity as variables in the effectiveness of commercial approaches in the 18-25 year-old demographic. The five commonly used approaches in advertisements are emotional, rational, moral, humor, and celebrity. A random sample of Georgia Southern students from 2005 summer semester classes were used as the sample. The students viewed five different television commercial approaches for the same product, which is Anheuser-Busch Budweiser, in a classroom setting. They immediately recorded their results after each commercial viewing. The survey analysis will answer five research questions. Which of the five approaches gained the most positive attention from audience? Is gender related to the reaction of commercials? Is ethnicity related to the reaction of commercials? How do the five commercials compare with the variables favorite, strong, memory, and negative? These findings will be useful for media professionals to better understand media and audience relationships. The findings will also provide research marketers with a better understanding of what commercial approaches are most effective according to gender and ethnicity factors in a demographic audience segment.

Introduction

One of the most pervasive media in our lives is television. More than any modern invention, television has affected the content and nature of our thought, because it so thoroughly pervades our conscious waking time. For some people, as much as four or five hours a day is spent on watching television (Belknap & Leonard, 1991). And an average of 1500 advertising commercial messages are seen daily (Meeske, 2003). Television commercials not only reflect cultural images but they create, teach, and reify them as well (Rak & McMullen, 1987). As Edward Hall stated, communication is culture and culture is communication. Culture is the number one factor in power of buying, and with the help of television, advertising is about the power of influence.

In 2002, broadcast television and cable television used a combined 24.7 percent of the total media used on U.S. ad spending (AdAge, 2003). In the American Heritage dictionary, advertising is defined as the activity of attracting public attention to a product or business, as by paid announcements in the print, broadcast, or electronic media. Advertisers use various approaches that try to motivate consumers to buy the product or service. Five commonly used approaches in television advertisements are emotional,

rational, moral, humor, and celebrity. These approaches are all used with the college- age demographic in marketing. The college-age demographic is the new target audience since they are more media savvy. However, which approach in advertising is the most effective for the college- age demographic with gender and ethnicity being variables?

Review of Literature

The purpose of advertising is to persuade. Advertising serves many functions. In order to influence consumer decision making, advertising must capture the consumer's attention, establish a distinctive and desirable identity for the product, service, idea, or person it is selling, it must differentiate this product from its competitors, and lastly provide the consumer with a motive for buying the product (Reich, 1995, p.7). Commercial marketers use many approaches in advertising to grasp the consumer's attention, interest, desire, and action.

Five commonly used approaches in television advertising are the emotional, rational, moral, humor, and celebrity. There has been little previous research dealing with three main: approaches, humor, emotion and celebrity. However, there has not been any significant amount of research done on the other two approaches—moral and rational. Emotional approaches are used to generate either positive or negative emotions that can motivate purchase. These approaches are used to get people to stop doing things they should not. Rational approaches relate the audience's self-interest by demonstrating that a product will deliver the desired results. Moral approaches are aimed at our sense of what is "right" or "wrong." They are frequently used to urge consumers to support social clauses. Humor approaches are used to involve the viewer because we feel good about things that are amusing or funny. The celebrity approach is used with a well-known figure endorsing the product or service, or being the spokesperson (Meeske, 2003, p. 78-83).

Previous research on the humorousness in advertising is it can be achieved through the use of expected/unexpected contrasts rather than possible/impossible contrasts. Viewers appeared to consider the ads less funny if impossible as opposed to unexpected (but possible) events where central components of the humorous contrast (Alden & Hoyer, 1993, p.35). Sternthal and Craig (1973) have reported the use of humor in advertisements increases the attentional attraction of the persuasive message. Because humor within society typically provides a venue for dealing with difficult or sensitive issues within everyday life, it is hypothesized that humor may serve the same function within television commercials. Humor plays an important role in everyday life and is considered one of a few identifiable factors that make life "delightful, rich, and enjoyable" (Fry, 1987, p. vii). Humor acts as a message within social context constructed by the sender with the intention of producing smiling or laughter in the receiver (Ziv, 1988). Humor is part of our everyday life where it provides entertainment and is a source of coping.

One of the strategies with which television commercials attempt to persuade is the emotional appeal. Previous study suggests that emotional appeals will be most effective at evoking physiological arousal, enhancing memory, and creating more positive attitudes (Reich, 1995). Hirschman and Holbrook (1982) stated emotions play a key role in the consumption of consumer products. Emotion can play an important role in advertising by simply increasing the communication effectiveness of the message. Using emotions in

advertisements may lead to positive feelings (affect) toward a brand (Bower and Cohen, 1982; Ray and Batra, 1982). Emotional appeals play an important role in enhancing ad effectiveness across a variety of product categories and market conditions (MacInnis, Rao, & Weiss, 2002).

Previous research suggests that for a celebrity endorsement to be effective, the characteristics of the celebrity must match up with the attributes of the product. The perceived fit between the celebrity-product combinations can be related to physical attractiveness, expertise or other highly relevant characteristics (Hsu & McDonald, 2002, p. 21). Hsu and McDonald also agree that the use of multiple celebrities for endorsement advertising may help the advertiser build a sense of consensus, avoid audience boredom, and appeal to multiple audiences. Atkin and Block (1983) found that the use of a celebrity in beer advertising led to more favorable ad ratings and more positive product evaluations. The researchers also noted the influence of a well-known endorser attracts attention to the advertisement in the cluttered stream of messages and young people tend to respect famous entertainers and athletes; thus, the impact of the celebrity extends to the message and product. Another study was done that tested four types of endorsers: celebrity, CEO, expert, and typical consumer and determined that in comparison with other endorser types, the celebrity endorser scored particularly well on dimension such as trustworthiness, believability, persuasiveness, and likeability (Freiden, 1984).

Browne and Lee (1995) suggested that African American consumers tend to be more receptive to advertising in general and more responsive to advertising featuring African American models. The study found that there was a related impact of celebrity to the brand preferences and purchase intent among viewers. When African American characters do appear on television, African American people may be more likely to pay attention to and identify with them because of salient cultural cues like race (Brookins, 1999). African American consumers were at least twice as likely to rate celebrities being more believable than non-celebrity endorsers (Hume, 1983). Williams and Qualls (1989) analyzed the difference between African American and White middle-class consumers' reactions to advertising featuring two African American endorsers, Bill Cosby and Sugar Ray Leonard. The study found that African American subjects rated celebrity advertising more positively than did Whites regardless of their level of racial identity index.

We see programs and advertising with the traditional stereotypes and images of women. Here are women twittering to other women over the joys of some fabric softener while still having time to provide a full course meal for the family (Armstrong, 1999). Researchers Dominick and Rauch (1972) presented compelling evidence that revealed women were seven times more likely to appear in ads for personal hygiene products, cosmetics, and domestic items. They were significantly less likely to appear in ads for cars, trucks, and gas. Kilbourne (1995) in "Beauty and the Beast of Advertising," recognizes that a number of studies have reached the same conclusion in that a large number of advertisements portray women as housewives or sex objects. With these such advertisements that are portrayed by women, how are women receptive to advertisements that may degrade women or use them as sex objects.

However, in a recent study, Dube and Fisher (2005) examined gender differences in emotional advertising because the response environment naturally varies on both the types of emotions evoked and audience composition. The results from the study were when in private, males reported the same level of viewing pleasure as females for ads that

emphasized themes related to love, warmth, tenderness, and sentimentality. This indicates that the social context of the advertising experience matters for males.

In 1998, De Palsmacker and Geuens studied whether four executions: warmth, humor, non-emotional, and erotica resulted in ad-evoked feelings. They investigated 115 students in the college age demographic of 18-25. The students examined alcoholic print advertisements and answered a questionnaire. The study found that non-emotional ads were the least favorable affective reaction. Men were more interested in the erotica stimuli, whereas women were more interested in the warmth stimuli. There was no significant difference between men and women in the degree of interest in the ads (pg.7).

The following research questions will be specifically addressed:

RQ1: Which of the five approaches gained the most positive attention?

RQ2: Is gender related to the reaction of commercials?

RQ3: Is ethnicity related to the reaction of commercials?

RQ4: How do the five commercials compare with the variables favorite, strong, memory, and negative?

Methodology

Subjects: Subjects in the study were 100 participants from Georgia Southern University summer 2005 semester classes. The participants were a convenient sample taken from six classes. The study was explained to the subjects as an investigation of television commercials. The participants were given an Informed Consent in order to further explain the study and their confidentiality. Ethnicity, age, gender, and classification were all taken into account. Subjects had to be aged 18-25 to participate in study.

Advertisements: Commercials were all Budweiser spots. In commercial one, troops were walking through the airport and onlookers or passengers began to applaud. In commercial two, a male and female are skinny-dipping in a swimming pool. Below the pool is a bar where people are watching them and taking pictures. The couple becomes flustered and embarrassed. Commercial three introduces Cedric the Entertainer and he sprays a bottle of beer in a woman's face. In commercial four, a couple is having a discussion. The girlfriend is talking to her boyfriend about her issues, while he seemingly looks as he is paying attention. The boyfriend is not paying attention to her and is watching a football game behind her. She compliments him on being a great listener. The last and fifth commercial is an actual Budweiser Select beer being advertised. Each commercial represented an approach, as follows:

Commercial One: Moral Approach

Commercial Two: Emotional Approach

Commercial Three: Celebrity Approach

Commercial Four: Humor Approach

Commercial Five: Rational Approach

Experimental Procedure: Subjects viewed the five commercials from a television set equipped with a VCR in a classroom. After each commercial, the subjects responded to a survey that was given. The survey instrumentation was a test sample from the American Social Science and was then modified (Appendix A). For each commercial, subjects responded to the variables if the message was understood, if the ad was believable, if the

benefits were believable, if the message was relevant, if they would purchase the product, and if there were any ads that they have seen that were better in the same category. The subjects' responses were rated on 1-5 scale, 1 being strongly agreed and 5 being strongly disagreed. The subjects then chose from the five commercials using the variables, which was their favorite, which had the strongest emotional response, which was mostly memorable, and which had a negative response, if any? There were thirty-eight variables in all.

Data Analysis: SPSS 12.0 for Windows was used to analyze data collection. Descriptive Statistics were used to summarize all survey responses. Independent t-tests were used to compare responses on variables message, believe, relevant, benefits, purchase, and adbetter by gender and ethnicity. Independent Chi-square analyses were used to compare responses on variables favorite, strong, memory, and negative by gender and ethnicity.

Coding: Survey number was coded by 1-100. Gender was coded by female (1) and male (2). Race was coded by Black (1), Native American (2), Other (3), White (4), Asian(5), Hispanic(6), and Multiracial(7). Class was coded by Freshman (1), Sophomore (2), Junior (3), and Senior (4). Commercials were coded by commercial one (1), commercial two (2), commercial three (3), commercial four (4), commercial five (5), and no commercial (6). The variables were rated and coded by strongly agreed (1), somewhat agreed (2), neither (3), somewhat disagree (4), and strongly disagreed (5).

Results

Table 1: Descriptive Statistics percentage of gender, race, and age mean

Race	
Black	48%
White	48%
Gender	
Female	72%
Male	28%
Age	
Mean	20.90
Standard Deviation	1.67

Note: only Black and White was used in the study because of a low number of Others (4%).

Table 2: Descriptive Statistics
Mean of all participants for each variable by commercials

	Message Understood	Advertisement Believable	Message Relevant	Benefits Believable	Purchase Product	Ad Better
--	--------------------	--------------------------	------------------	---------------------	------------------	-----------

Dosunmu: The Variable Effectiveness

Commercial1	2.04	2.12	2.26	2.77	3.55	3.12
Commercial2	1.90	2.90	3.11	3.13	3.33	2.40
Commercial3	1.62	2.08	2.87	2.72	3.12	2.04
Commercial4	1.68	1.40	2.39	2.41	3.22	2.51
Commercial5	1.47	1.88	2.83	2.08	2.77	2.65

Table 2: The Descriptive Statistics summarized all of the survey responses from all participants. The lower the mean, the more agreement there is to strongly agree because it is rated one on the scale. In commercial 5, the message was most likely understood with a mean of 1.47 and was closest to strongly agreed. Commercial 4 was more believable than the others with a mean of 1.40. Commercial 1 was somewhat more relevant than others with a mean of 2.26, probably because the commercial was a salute to the troops. Commercial 5 was somewhat more likely to purchase the product (2.77) and the benefits were more believable(2.08) than the others. Overall commercial 3 was somewhat more liked than the other ads, with a mean of 2.04.

Table 3: Descriptive Statistics.

Percentage of all participants for each variable by commercials

	Favorite	Strong	Memory	Negative
Commercial1	20.0	72.0	23.0	17.0
Commercial2	27.0	2.0	21.0	19.0
Commercial3	34.0	18.0	43.0	2.0
Commercial4	16.0	6.0	9.0	16.0
Commercial5	3.0	2.0	4.0	19.0
No Commercial				27.0

Table 3: The Descriptive Statistics summarized all survey responses from all participants on the variables favorite, strong, memory, and negative. The higher the percentage, the more responses from the participants there was. Commercial 3 was the most favorable (34.0). Commercial 1 had an outstanding strong emotional response (72%). Commercial 3 was also the most memorable (43%). Overall, there were no commercials that had a negative response from all participants (27.0%).

Table 4: Independent t-tests

A comparison of gender by commercials to variables

	Message Understood	Advertisement Believable	Message Relevant	Benefits Believable	Purchase Product	Ad Better
Commercial1						
Female	2.04	2.03	2.20	2.68	3.50	3.15
Male	2.04	2.36	2.40	3.00	3.68	3.03
Commercial2						
Female	1.81	2.89	3.17	3.11	3.47	2.33
Male	2.10	2.93	2.96	3.18	2.96	2.57

Commercial3						
Female	1.63	2.06	2.99	2.69	3.32	2.08
Male	1.61	2.14	2.57	2.79	2.60	1.93
Commercial4						
Female	1.76	1.42	2.54	2.42	3.43	2.57
Male	1.46	1.36	2.00	2.39	2.68	2.36
Commercial5						
Female	1.35	1.81	2.99	2.06	2.83	2.53
Male	1.79	2.07	2.43	2.14	2.61	2.96

Table 4: Independent t-tests were performed to determine if there were significant difference in response of males and females. If ($p < \text{or} = .05$), there is a significant difference. There were only four significant differences found. Males were more likely to purchase the product in commercial 3 ($t = 2.60, df = 98, p = .011$). Males also perceived the commercial to be more relevant to them in commercial 4 ($t = 2.20, df = 98, p = .030$) and they were more likely to purchase the product in this commercial ($t = 2.71, df = 98, p = .008$). However, in commercial 5, females were more likely to understand the message ($t = -2.68, df = 98, p = .009$).

Table 5: Independent t-tests
A comparison of ethnicity by commercials to variables

	Message Understood	Advertisement Believable	Message Relevant	Benefits Believable	Purchase Product	Ad Better
Commercial1						
Black	2.25	2.31	2.44	2.94	3.90	3.35
White	1.90	1.98	2.15	2.65	3.25	2.94
Commercial2						
Black	2.19	3.00	3.54	3.48	3.69	2.69
White	1.60	2.81	2.60	2.79	2.94	2.08
Commercial3						
Black	1.65	2.04	3.00	2.83	3.21	1.94
White	1.56	2.13	2.69	2.58	2.96	2.10
Commercial4						
Black	1.73	1.44	2.58	2.50	3.50	2.52
White	1.67	1.38	2.15	2.33	2.92	2.50
Commercial5						
Black	1.48	1.81	2.94	2.00	2.83	2.58
White	1.38	1.88	2.67	2.06	2.60	2.58

Table 5: Independent t-tests were performed to determine if there was a significant difference in the response of blacks and whites. If ($p < \text{or} = .05$), there is a significant difference. There was a huge significant difference between blacks and whites in commercial 2. Whites were more likely to understand the message ($t = 2.71, df = 94, p =$

Dosunmu: The Variable Effectiveness

.008), the message was more relevant to them ($t = 3.89$, $df = 94$, $p = .000$), the benefits were more believable ($t = 2.96$, $df = 94$, $p = .004$), they were more likely to purchase the product ($t = 3.16$, $df = 94$, $p = .002$), and the ad was better than others they have seen in the same category ($t = 2.84$, $df = 94$, $p = .006$). Whites were also more likely to purchase the product in commercial 1 ($t = 2.96$, $df = 94$, $p = .004$) and commercial 4 ($t = 2.27$, $df = 94$, $p = .026$).

Table 6: Independent Chi-square analysis.
Cross tabulations of gender by variables (%)

	Favorite	Strong	Memory	Negative
Commercial1				
Female	23.6%	76.4%	27.8%	16.7%
Male	10.7%	60.7%	10.7%	17.9%
Commercial2				
Female	30.6%	1.4%	19.4%	19.4%
Male	17.9%	3.6%	25.0%	17.9%
Commercial3				
Female	33.3%	15.3%	44.4%	2.8%
Male	35.7%	25.0%	39.3%	.0%
Commercial4				
Female	8.3%	4.2%	2.8%	18.1%
Male	35.7%	1.07%	25.0%	10.7%
Commercial5				
Female	4.2%	2.8%	5.6%	16.7%
Male	.0%	.0%	.0%	25.0%
No Commercial				
Female				26.4%
Male				28.6%

Table 6: Independent Chi-square (X^2) analysis looks for relationship among categorical variables if there is a significant relationship and a different pattern of response. If ($p < \text{or} = .05$), the two variables are related. A significant relationship was found between gender and the variable favorite ($X^2 = 13.53$, $p = .009$). For commercial 3 females responses were (33.3%) for favorite and (30.6%) for commercial 2. Males responses for favorite were (35.7%) for both commercials 3 and 4. Another significant relationship was found between gender and the variable memory ($X^2 = 15.60$, $p = .004$). Males perceived commercial 3(39.3%), commercial 2(25.0%), and commercial 4(25.0%) to be the most memorable, whereas females perceived commercial 3(44.4%) and commercial 1(27.8%) to be the most memorable.

Table 7: Independent Chi-square analysis.
Cross tabulations of ethnicity by variables (%)

	Favorite	Strong	Memory	Negative
Commercial1				
Black	14.6%	58.3%	18.8%	18.8%
White	25.0%	85.4%	29.2%	14.6%
Commercial2				
Black	20.8%	2.1%	12.5%	29.2%
White	33.3%	2.1%	27.1%	8.3%
Commercial3				
Black	41.7%	31.3%	54.2%	.0%
White	25.0%	6.3%	31.3%	4.2%
Commercial4				
Black	20.8%	6.3%	10.4%	10.4%
White	12.5%	4.2%	8.3%	22.9%
Commercial5				
Black	2.1%	2.1%	4.2%	22.9%
White	4.2%	2.1%	4.2%	14.6%
No Commercial				
Black				18.8%
White				35.4%

Table 7: Independent Chi-square (X^2) analysis tests if two categorical variables are related. A significant chi-square indicates that the two variables are related. A significant relationship was found between ethnicity and variable strong ($X^2 = 10.65$, $p = .031$). Majority of whites had a strong emotional response to commercial 1 (85.4%), whereas blacks had a balance between commercial 1 (58.3%) and commercial 3 (31.3%). There was also a significant relationship found between race and variable negative ($X^2 = 13.41$, $p = .020$). Whites had no negative response to the commercials (35.4%), whereas blacks had a negative response to commercial 2 (29.2%) and commercial 5 (22.9%).

Discussion

Research question one was supported with Commercial 3, which was the celebrity approach, and Commercial 5, which was the rational approach, gained the most positive attention by all the participants. Having a celebrity approach in the advertisement is favored by all participants; however, the rational approach had an affect on the participants to purchase the product.

Research question two was not really supported also. There was somewhat of a significant difference among males and females with purchase intent. Males were more likely to purchase the product in commercial 3 (celebrity approach) and commercial 4, which was the humor approach.

Research question three examined commercial reaction to ethnicity. It was supported because there was a significant difference in commercial 2, the emotional approach, among blacks and whites. Whites were more likely to purchase the product, the benefits were believable, it was more relevant to them, the message was more understood, and the ad was better than others. Commercial 2 as the rational approach had a huge impact on whites versus blacks who did not care for the commercial. Blacks had a

negative response to commercials 2 and commercial 4, which was the humor approach. However, blacks had zero negative response to commercial 3, which was the celebrity approach with an African American entertainer.

The goal of the last research question was to compare the commercials among the variables favorite, strong, memory, and negative. Commercial 3, which was the celebrity approach, was the most favorable and memorable among the participants. Commercial 1, which was the moral approach, had the strongest emotional response. The commercial showed support for the troops as the “right” thing; however, it affected the participants emotionally even though there was somewhat of a negative response between ethnicities. Overall, there was not one specific commercial that had a negative response.

Conclusion

Furthermore, the celebrity approach and the rational approach are influential among college students. The previous research entails the celebrity approach to be very influential among young people. But there was not a huge significant difference between males and females. Even though there was a significant difference in purchase intent from males and females in commercials 3 and 4, it cannot be justified that those commercial approaches were liked better by males since only one variable was described as significant. However, there was a significant difference among ethnicity. Whites responded highly to commercial 2, or the emotional approach, while blacks did not think too highly of the commercials. There was a significant difference in all variables, except for the variable believable. This implies that the notion of the emotional approach worked more effectively on whites than blacks.

Limitations

This research has several limitations. One is the small sample size. Only 100 participants were in this study out of 6,000 students attending summer school. A larger sample size would have produced even distribution of males and females. A better representation of males would have constructed a significant difference among gender. Having a longer process in order to conduct the experiment would also produce a larger sample size.

Another limitation is the variety of commercials and products. There were only five commercials used for the same product brand, which was Budweiser. The use of more commercials and using different product brands can have an impact on the results. Besides only using Budweiser as a product, other products to consider would be Pepsi, Gillette for men and Venus for women.

Further Research

One question to be examined for further research is the viewing of different approaches in advertisements. There were only five approaches used in this study. However, there are other approaches that advertisers use. For example, the five senses approach which deals with sight, sound, smell, touch, and taste. How would that approach work among college students? Another approach is the sex appeal. Would this approach have a significant difference between genders?

The second question to be examined is the use of approaches among different demographics. In this study, the 18-25 year-old demographic was used as a sample.

However, for further research, would there be a variable effect of gender and ethnicity among 30-35 year-olds and 45-49 year-olds? One research question to consider is if there is a significant difference between black women and white women among the different demographic age group.

References

Alden, Dana L., & Hoyr, Wayne D. (1993). An Examination of Cognitive Factors Related to Humorousness of Cognitive Factors. *Journal of Advertising*, 2(2), 29-37.

Atkin, C., & Block, M. (1983). Effectiveness of Celebrity Endorsers. *Journal of Advertising Research*, 23, 57-61.

Brookins, B'Jordan T. (1999). The portrayals of African Americans on Television Commercials. (Doctoral dissertation, Howard University, 1999). *Dissertation Abstracts International* (UMI No. 9966738).

Browne, Louis A. & Lee, E. Bun (1995). Effects of Television Advertising on African American Teenagers. *Journal of Black Studies*, 25(5), 523-536.

De Palsmacker, P. & Geuens, M.(1998). Feelings Evoked by Warm, Erotic, Humorousness or Non-emotional Print Advertisements for Alcoholic Beverages. *Academy of Marketing Science Review*, 19(1).

Dube, Laurette & Fisher, Robert J. (2005). Gender Differences in Responses to Emotional Advertising: A Social Desirability Perspective. *Journal of Consumer Research*, 31(4), 850-858.

Freiden, Jon B. (1984). Advertising Spokesperson Effects: An Examination of Endorser Type and Gender on Two Audience. *Journal of Advertising Research*, 24, 33-41.

Fry, W.R. (1987). *Handbook of Humor and Psychotherapy: Advances in the Clinical use of Humor*. Sarasota, FL: Professional Resource Exchange, Inc.

Hirschman, E., & Holbrook, M. (1982). Hedonic Consumption: Emerging Concepts, Methods, and Propositions. *Journal of Marketing*, 46, 92-101.

Hsu, Chung-Kue, & McDonald, Daniella (2002). An Examination on Multiple Celebrity Endorsers in Advertising. *The Journal of Product and Brand*

Management, 11(1), 19-29.

Hume, S. (1983). Stars are lacking Luster as Ad Presenters. *Advertising Age*, p. 3

MacInnis, Deborah, Rao, Ambar G., & Weiss, Allen M. (2002). Assessing When Increased Media Weight of Real- World Advertisements Help Sales. *Journal of Marketing Research*, 39, 391-408.

Meeske, Milan D. (2003). *Copywriting for the Electronic Media* (4th ed.). Canada: Thomson & Wadsworth

Ray, M. L., & Batra, R. (1982). Emotion and Persuasion in Advertising: What We do and Don't Know about Affect. *Advances in Consumer Research*, 21, 543-548.

Reich, Robert D. (1995). The Role of Emotional Images in the Persuasive Effect of Television Commercials. (Doctoral dissertation, Temple University, 1995). *Dissertation Abstracts International* (UMI No. 9600067).

Sternthal, B., & Craig, C. S. (1973). Humor in Advertising. *Journal of Marketing*, 37, 12-18.

Williams, J.D., & Qualls, W.J. (1989). Middle-class Black consumers and Intensity of Ethnic Identification. *Psychology and Marketing*, 6, 263-286.

Ziv, A. (1984). *Personality and Sense of Humor*. New York: Springer Publishing Company

(Appendix A)
Television Commercial Approaches and Response
Research Instrument

Please fill out part 1 immediately.

Gender: Female__ Male__ (please check that applies to you)

Race: (please check that applies to you)

Black (African American) __ Native American__ Other__ White (Caucasian)
 __ Asian__

Hispanic__ Multiracial__

Age: 18__ 19__ 20__ 21__ 22__ 23__ 24__
 25__

Classification: Freshman__ Sophomore__ Junior__ Senior__

Please view the first commercial.

Based on your reaction to this commercial

	Strongly Agree	Somewhat Agree	Neither	Somewhat Disagree	Strongly Disagree
The ad message is understandable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The advertisement is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ad's message is relevant to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The benefits described in the ad are believable to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After viewing this ad, I would consider purchasing the product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This ad is much better than other ads for products in this product category.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please view the second commercial.

Based on your reaction to this commercial

	Strongly Agree	Somewhat Agree	Neither	Somewhat Disagree	Strongly Disagree
The ad message is understandable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The advertisement is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ad's message is relevant to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The benefits described in the ad are believable to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

McNair Scholars Journal of Georgia Southern University, Vol. 6, 2005

After viewing this ad, I would consider purchasing the product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This ad is much better than other ads for products in this product category.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please view the third commercial.

Based on your reaction to this commercial

	Strongly Agree	Somewhat Agree	Neither	Somewhat Disagree	Strongly Disagree
The ad message is understandable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The advertisement is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ad's message is relevant to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The benefits described in the ad are believable to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After viewing this ad, I would consider purchasing the product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This ad is much better than other ads for products in this product category.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please view the fourth commercial.

Based on your reaction to this commercial

	Strongly Agree	Somewhat Agree	Neither	Somewhat Disagree	Strongly Disagree
The ad message is understandable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The advertisement is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ad's message is relevant to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The benefits described in the ad are believable to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After viewing this ad, I would consider purchasing the product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This ad is much better than other ads for products in this product category.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please view the fifth commercial.

Based on your reaction to this commercial

Dosunmu: The Variable Effectiveness

	Strongly Agree	Somewhat Agree	Neither	Somewhat Disagree	Strongly Disagree
The ad message is understandable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The advertisement is believable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ad's message is relevant to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The benefits described in the ad are believable to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After viewing this ad, I would consider purchasing the product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This ad is much better than other ads for products in this product category.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please answer the following questions.

	#1	#2	#3	#4	#5
Which commercial was your favorite?					
Which spot did you have the strongest emotional response to?					
Which do you remember the best?					
Which spot, if any, did you have a negative response to?					

AN EXAMINATION OF ATTITUDES TOWARD SUICIDE

Synovia Edwards, McNair Scholar

Dr. Michael Nielsen, Research Mentor
Department of Psychology

Abstract

A large body of research has examined demographic variables associated with suicide rates, but relatively little research focuses on people's attitudes toward suicide. Because religion has important implications for issues of life and death, the present study explores the relationship between religion and attitudes about suicide. Previous research has demonstrated that older people have a more accepting attitude toward suicide and that religious people, especially Catholics, show less acceptance of suicide. My research study explores the effect of religion on attitudes towards suicide versus attitudes towards natural death. Two measures of religion -- religious identity and religious orientation -- are correlated with attitudes regarding suicide. Demographic variables including age, gender, race, and religious affiliation also are examined in this study. A sample of 75 respondents completed the questionnaire anonymously via the internet. It was hypothesized that people who score higher on measures of religious identity and intrinsic religious orientation would have more negative attitudes toward suicide. The data were generally consistent with this prediction. Data also showed that Christians, women, and blacks had more negative views regarding suicide than did non-Christians, men, and whites.

An Examination of Attitudes Toward Suicide

Death is an everyday event that everyone will experience at some point in time. According to Morin and Welsh (1996), by the time a person reaches their teen years they will have experienced death either directly or indirectly and will have their own views of death. People encounter different types of death like death by accidental or natural causes, homicide, and suicide. Suicide, the deliberate taking of one's own life (Parker, Cantrell, & Demi, 1997), raises serious questions regarding personal choice and existential questions. The present research investigates the possible connection between religion and attitudes toward suicide.

The rise in reported suicide cases in the US has shown that it is becoming the subject of increasing concern. For the past ten years, suicide rates among older persons in the US have increased (Parker, Cantrell, & Demi, 1997). Similarly, a primary reason for death among young people is death by suicide (Payne & Range, 1995) and this has become a target of public concern in the past couple of years (Wong, 2003). Many teens commit suicide, but the suicide rate among older people is greater than that of younger people. Research has also been done on the suicide rates among different races. According to Bender (2000), suicide is rarer among elderly African American women than elderly Caucasian women.

The disrepute of suicide has expanded in the past couple of years with publicized reports of the "suicide crisis" and the "right-to-die" (Sawyer & Sobal, 1987). This has led to widely varying attitudes towards suicide (Ingram & Ellis, 1995). Suicide itself affects people's attitudes

toward death; in a study done by Range and Thompson (1987), people were found to be less compassionate of people who died as a result of suicide. It has also been suggested that abuse can cause a person to have a less positive attitude towards suicide (Gutierrez, Thakkar, & Kuczen, 2000). Different factors like age and race also affect a person's attitude towards suicide.

Segal, Mincic, Coolidge, and O'Riley (2004) showed that a person's age has much influence on the way they view suicide. Suicide rates among older people are higher than that of younger people. This is because older people have a more positive view about suicide than younger people and are more accepting of suicide (Segal, Mincic, Coolidge, & O' Riley, 2004). This study suggests that there is a relationship between suicide and a need of more religion and they also believed that suicide was more normal. Younger people were less accepting of suicide.

There has been conflicting research on the differences between African American and Caucasians' attitudes towards suicide. According to Bender (2000), blacks' attitudes about suicide were more negative than that of whites. Blacks even held a more negative attitude towards the fatally ill committing suicide. Overall, blacks were less supportive of suicide no matter what caused the bereaved to commit suicide. Sawyer and Sobal (1987) agreed with Bender in their findings. They also found that nonwhites held more negative attitudes towards suicide than whites. Results from a study by Parker, Cantrell, and Demi (1997) showed different results than that of the previous studies. They found that there were no differences in attitudes about suicide among different races or genders.

Religion also has a strong link to one's attitude about suicide. One way to view religion is that it is learned from parents early on in life (Stack, Wasserman, & Kposowa, 1994). From an institutional perspective, it is important to recognize that different religions teach different things about suicide. For instance, Hindus tolerate suicide but Muslims view suicide as a sin because the *Koran* prohibits suicide (Kamal & Loewenthal, 2002). According to Stempsey (1998), suicide is neither definitively affirmed nor denounced in the *Bible*. In his study, he considered cases in the *Bible* that are labeled as suicides. He discussed Ptolemy Macron poisoning himself (2 Maccabees 10:13) and Ahithophel hanging himself (2 Samuel 17:23). When examining other religious traditions, one may find dissimilar beliefs because different religions have their own different sources like the *Bible* and *Koran* that tell them how they should view different things in life.

Religion establishes a difference between suicide and death; all religions see death as being essential to life; whereas some religions view suicide as prohibited, others view it as a pious act (Manor, Vincent, & Tyano, 2004). According to Clarke, Bannon, and Denihan (2003), there is conflicting evidence regarding the connection between religion and suicide rates. There is greater consensus; however, on the role that church attendance plays in the way that a person views suicide. For example, Siegrist (1996) hypothesized that a person's dedication to his religion would have a big impact on his attitude about suicide. His results supported his hypothesis by showing that a person's attendance at church predicted lower levels of support of suicide. Church attendance was also examined in a study by Neeleman, Halpern, Leon, and Lewis (1997), which looked at associations between religion and suicide. A higher suicide rate among females was associated with lower levels of religious beliefs and church attendance. They also found that the more religious a person was, the less he tolerated suicide.

Religious identification represents an attempt to measure the extent to which religion is a central part of a person's identity. Thus, it may be a more sensitive measurement of religion than would religious affiliation. In this study, religious identification is measured by the MMPI Religious Identification Scale (Panton, 1979). Representative items on this scale include "I go to

church almost every week” and “I believe in life hereafter” were used to measure religious identification.

Religious- or denominational- affiliation is a rather coarse way of measuring religion. More subtle measures address the individual’s psychological orientation toward religion. Gordon W. Allport defined two types of religious orientations -- intrinsic and extrinsic -- that a person may have (Donahue & Nielsen, in press). A person who displays intrinsic religious orientation will live each day according to his religion. Religious devotion serves to guide the person’s life. Someone who has an extrinsic religious orientation will put his religion to use by finding relief from his religion during difficult times or by using religion as a social support network. Research using religious orientation as a framework has come to dominate psychological studies of religion, and yet little is known about how religious orientation might be correlated with attitudes toward suicide. This is a central question to be investigated in the present study.

Extrinsic religious orientation has been separated into two different types-- personal and social (Spilka, Hood, Hunsberger, & Gorsuch, (2003). The personal-extrinsic orientation is present when someone gets personal gain from religion, such as when the person seeks religion as a way of gaining relief from personal problems. For example, people may pray to be relieved from such problems. This is contrasted with a social extrinsic orientation, which represents religious involvement that assists in one’s social relationships.

To summarize, attitudes regarding suicide are affected by a variety of demographic variables. Age, race, and religious affiliation have been found to correlate with attitudes toward suicide. The present study investigates the correlation of religious identity and religious orientation, as well as demographic variables, with suicide attitudes. Specifically, it was hypothesized that people who score higher on measures of religious identity and intrinsic religious orientation will have more negative attitudes toward suicide.

Method

Participants

A convenient sample of 75 participants, consisting of both females (N = 46) and males (N = 29), was obtained via the internet. Twenty-four participants were solicited from an Introduction to Psychology class and received extra credit for their participation, while the remaining 51 participants completed the questionnaire as a result of their visit to the webpage while surfing the internet. Mean age was 30.5 years, and ranged from 18 - 66. Participants were primarily Caucasian (N= 48) but included African Americans (N= 18), Asians (N = 4), Multi-racial (N = 3), and Hispanics (N = 2). Most participants’ religious preference were Christianity (N = 50), Judaism (N = 2), and Agnostic (N = 2). Others included Pagan, Islam, Buddhist, Unitarian, New Age, Atheist, and those with a mixture of religions. The most commonly reported nationality was the USA (N = 60). Others included Estonia, China, Australia, Philippines, Germany, Slovakia, India, Turkey, England, and the UK.

Materials

Participants were given a survey that consisted of 42 items from three different surveys. The first 13 items addressed their attitudes towards suicide. Next, the Religious Orientation Scale – Revised (Gorsuch & McPherson, 1989) was used. It consisted of the first 12 questions that measured intrinsic and extrinsic religious orientation. A clerical error inadvertently omitted the final two items from this scale. The items from these questionnaires used a five-point response scale that ranged from strongly disagree to strongly agree. Next, the 12-item MMPI Religious

Identification Scale (Panton, 1979) was used to measure participant's identification with religion and participation in religious activities. The items for this scale were true or false type questions. The last five questions asked demographic questions regarding age, gender, race, nationality, and religious preference.

Procedures

Data collection was done via a form on the internet posted at www.psywww.com/psyrelig/. The participants completed the survey online after reading a statement of informed consent (Appendix A). After completing the survey, participants were thanked and directed to a link that provided information about suicide.

Analysis

Data were analyzed by using SPSS. Pearson correlation and independent t-tests were used in analyzing the data. For the present paper, analyses focused on five suicide attitude questions because they were of most interest. The items were "Suicide should be viewed in the same way as death by natural causes," "People who commit suicide do not see other options for dealing with their troubles," "People who commit suicide have serious problems," "There is no good reason for someone to commit suicide," and "The person who commits suicide also commits a serious sin." Participants' responses to the religious identification and religious orientation scale items were averaged in order to generate scores on those scales. Analyses were then conducted, focusing first on the association of demographic variables on suicide attitudes, and then on the correlation of religious identification and orientation with suicide attitudes.

Results

The question of whether suicide is similar to death by natural causes was examined first. Independent *t* tests showed that demographic variables did not have any significant effect on people's responses to this item. Several religious variables, however, did correlate significantly. Personal Extrinsic religious orientation ($r = -.23, p < .05$), Intrinsic religious orientation ($r = -.25, p < .05$) and Religious Identification scores ($r = -.36, p < .01$), showed significant negative correlations with the belief that suicide is similar to death by natural causes. These data indicate that religious people are more likely than nonreligious people to see suicide as an unnatural way to end one's life.

The perceived problems faced by people who commit suicide, and the resources available to them, were examined next. Responses to the item, "People who commit suicide do not see other options" were affected both by demographic and by religious attitude items. Christians ($M = 4.38, SD = .83$) agreed more with this item than did non-Christians ($M = 3.54, SD = 1.215$), $t(72) = -3.48, p < .01$. Women ($M = 4.30, SD = .96$) were more likely to agree than men ($M = 3.79, SD = 1.08$) that suicide committers do not have other options, $t(73) = 2.13, p < .05$. Religious Identification ($r = .29, p < .05$), Personal Extrinsic religious orientation ($r = .26, p < .05$) and Intrinsic religious orientation ($r = .34, p < .01$), showed significant positive correlations with the belief that suicide committers do not have other options. A similar pattern of results was found for responses to the item, "People who commit suicide have serious problems." Christians ($M = 4.26, SD = .90$) were more likely than non-Christians ($M = 3.38, SD = 1.56$) to agree with this statement, $t(72) = -3.10, p < .01$. Likewise, females ($M = 4.26, SD = 1.04$) agreed more than men ($M = 3.52, SD = 1.33$) about committers having serious problems, $t(73) = 2.71, p < .01$. Religious Identification ($r = .33, p < .01$), Intrinsic religious orientation ($r = .33, p < .01$) and Personal Extrinsic religious orientation ($r = .33, p < .01$) all showed a positive correlation with

this belief. These data show that religious people, females, and Christians are more likely to see no options for people who commit suicide and serious problems with those who commit suicide.

Analyses next were conducted on the item, "There is no good reason to commit suicide." As predicted, Christians ($M = 3.54$, $SD = 1.42$) agreed more than non-Christians ($M = 2.00$, $SD = 1.35$) with this idea, $t(72) = -4.44$, $p < .01$. African American's ($M = 3.83$, $SD = 1.43$) agreed more than whites ($M = 2.75$, $SD = 1.51$) with this idea, $t(64) = 2.64$, $p < .05$. Religion's role is further illustrated in the correlations of religious identification and religious orientation scales with this item. Religious Identification ($r = .45$, $p < .01$), Intrinsic religious orientation ($r = .38$, $p < .01$) and Personal Extrinsic religious orientation ($r = .29$, $p < .01$), all showed positive correlations with the belief that there is no good reason to commit suicide. A similar pattern was found in responses to the item stating that a person who commits suicide is also committing a serious sin. Data indicated that Christians ($M = 3.60$, $SD = 1.37$) were more likely than non-Christians ($M = 1.63$, $SD = .97$) to believe this, $t(72) = -6.331$, $p < .01$. African American's ($M = 3.78$, $SD = 1.48$) were more likely than whites ($M = 2.71$, $SD = 1.52$) to believe this, $t(64) = 2.57$, $p < .05$. Religious people were also more likely to believe this than nonreligious people. Religious Identification ($r = .66$, $p < .05$), Intrinsic religious orientation ($r = .61$, $p < .01$), and Personal Extrinsic religious orientation ($r = .43$, $p < .01$), showed significant positive correlations with the belief that a person who commits suicide is also committing a serious sin. Taken as a whole, these results support the hypothesis that religion is associated with greater condemnation of suicide.

Discussion

As predicted, participants' attitudes toward suicide were significantly influenced by their religious orientation and identification. Correlations were found with people whose religious orientation was intrinsic and personal extrinsic. This showed that religious people held more negative attitudes towards suicide and those who commit suicide than nonreligious people. Religious people viewed suicide as a more unnatural way to end one's life and thought that those who committed suicide had problems and were committing a serious sin. They also felt that people who committed suicide did not have other options that would help them deal with the problems that led them to commit suicide. The same pattern of results was seen when religious identification scores were correlated with the suicide items. Those who identify themselves as being religious viewed suicide more negatively than did people who did not identify themselves as being religious.

Demographic variables had some effect on attitudes toward suicide. Blacks were more likely than whites to consider suicide a sin; they also were more likely to believe that there is no good reason to commit suicide. Women were more likely than men to believe that people who commit suicide do not see other options, and that they had serious problems. Finally, Christians were more likely to agree that there was no good reason to commit suicide and that those who commit suicide also commit a serious sin.

A social-extrinsic religious orientation was uncorrelated with attitudes towards suicide. This could be because people who have an extrinsic social religious orientation are reluctant to admit that they go to church to meet people or see their friends. This is considered a less honorable reason for being involved in religious activities, as many people feel that one should go to church to give praise to God, and they react negatively toward people who see church as merely a social outlet. This makes it difficult for extrinsic social people to own up to their type of religious orientation.

Edwards: An Examination of Attitudes

Segal, Mincic, Coolidge, and O'Riley (2004) found that younger adults and older adults held completely different attitudes towards suicide. They found that older adults found suicide to be more accepting than younger adults. They also had a more positive attitude towards suicide than younger adults. My results showed age had no correlation on how a person viewed suicide. Younger and older adults in this sample seemed to have comparable attitudes towards suicide. Results of the present study were surprising because it was hypothesized that younger adults viewed suicide in a more negative manner than older adults, but the present results showed that there was no difference.

Like the present study, previous research (Bender, 2000; Sawyer & Soball, 1987) found that blacks viewed suicide more negatively than did whites. This contrasts with the results of at least one other study that showed no difference between blacks and whites (Parker, Cantrell, & Demi, 1997). With the present study, there is growing support for the finding that blacks condemn suicide more strongly than do whites. Bender (2000) explained that her findings were probably due to the use of a non-random study that was performed in only one section of the USA. In addition, this study found that women had more negative views toward suicide than did men. This is consistent with a large body of research finding that men have higher rates of suicide than do women (Segal, Mincic, Coolidge, & O'Riley, 2004).

As with any study, there are limitations that should be taken into account when interpreting the results. It is possible that there may have been slightly different results if the two items from the Religious Orientation Scale- Revised (Gorsuch & McPherson, 1989) had not been omitted. The results obtained are consistent with our predictions, but this clerical error should still be taken into consideration. Given that only two items were omitted, any difference in the results probably would be small and would be limited to the intrinsic and social-extrinsic religious orientations.

Another limitation was the items used to measure religiousness. Several participants commented on the items of the religious identification and orientation scales, noting that they were more appropriate for Christianity than for other religions. It would be difficult to develop scales appropriate for use with all religions, given that they differ even in terms of whether or not God exists. One possible way to combat this would be to mention that the items may be biased toward Christianity but should be adjusted to fit one's own religious beliefs. This might help broaden the relevance of the scales to other religious groups.

Suicide rates are rising (Parker, Cantrell, & Demi, 1997) and there are many different attitudes about suicide. The present study has shown that religion plays a significant role in the way one views suicide. Related to this study is research by Segal, Mincic, Coolidge and O'Riley (2004), who found that older people believed increasing suicide rates were caused by a decline in religious involvement. This is an interesting hypothesis, and would benefit from additional study. By investigating these possible relationships, we may improve our understanding of suicide and the effect of beliefs on an important social problem.

References

- Bender, M.L. (2000). Suicide and older African-American women. *Mortality*, 5, 158.
- Clarke, C.S., Bannon, F.J., & Denihan, A. (2003). Suicide and religiosity- Masaryk's theory revisited. *Social Psychiatry & Psychiatric Epidemiology*, 38, 502.
- Donahue, M. J., & Nielsen, M. E. (in press). Religion, attitudes, and social behavior. In R. Paloutzian and C. Park (Eds.), *Handbook for the psychology of religion and spirituality*. New York: Guilford.
- Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/extrinsic measurement: I/E-revised and single-item scales. *Journal for the Scientific Study of Religion*, 28, 348-354.
- Gutierrez, P.M., Thakkar, R.R., & Kuczen, C. (2000). Exploration of the relationship between physical and/or sexual abuse, attitudes about life, and death, and suicidal ideation in young women. *Death Studies*, 24, 675.
- Ingram, E. & Ellis, J.B. (1995). Situational analysis of attitudes toward suicide behavior. *Death Studies*, 19, 269.
- Kamal, Z. & Loewenthal, K.M. (2002). Suicide beliefs and behavior among young Muslims and Hindus in the UK. *Mental Health, Religion, & Culture*, 5, 111.
- Manor, I., Vincent, M., & Tyano, S. (2004). The wish to die and the wish to commit suicide in the adolescent: Two different matters? *Adolescence*, 39, 279.
- Morin, S.M. & Welsh, L.A. (1996). Adolescents' perceptions and experiences of death and grieving. *Adolescence*, 31, 11, 585.
- Neeleman, J., Halpern, D., Leon, D., & Lewis, G. (1997). Tolerance of suicide, religion, and suicide rates: an ecological and individual study in 19 Western countries. *Psychological Medicine*, 27, 1165- 1171.

Edwards: An Examination of Attitudes

- Panton, J. H. (1979). An MMPI item content scale to measure religious identification within a state prison population. *Journal of Clinical Psychology, 35*, 588-591.
- Parker, L.D., Cantrell, C., & Demi, A.S. (1997). Older adults' attitudes toward suicide: Are there race and gender differences? *Death Studies, 21*, 289-298.
- Payne, B.J. & Range, L.M. (1995). Attitudes toward life and death and suicidality in young adults. *Death Studies, 19*, 559-569.
- Range, L.M. & Thompson, K.E. (1987). Community responses following suicide, homicide, and other deaths: The perspective of potential comforters. *Journal of Psychology, 121*, 193.
- Sawyer, D. & Sobal, J. (1987). Public attitudes toward suicide: Demographic and ideological correlates. *Public Opinion Quarterly, 51*, 92.
- Segal, D.L., Mincic, M.S., Coolidge, F.L., & O'Riley, A. (2004). Attitudes toward suicide and suicidal risk among younger and older persons. *Death Studies, 28*, 671.
- Siegrist, M. (1996). Church attendance, denomination, and suicide ideology. *Journal of Social Psychology, 136*, 559.
- Spilka, B., Hood, R. W., Hunsberger, B., & Gorsuch, R. (2003). *The Psychology of Religion* (3rd ed.). New York: The Guilford Press.
- Stack, S., Wasserman, I., & Kposowa, A. (1994). The effects of religion and feminism on suicide ideology: An analysis of national survey data. *Journal for the Scientific Study of Religion, 33*, 110.
- Stempsey, W.E. (1998). Laying down one's life for oneself. *Christian Bioethics, 4*, 202.
- Wong, W.S. (2004). Attitudes toward life and death among Chinese adolescents: The Chinese version of the Multi-Attitude Suicide Tendency Scale. *Death Studies, 28*, 91.

Appendix A

Attitudes About Suicide

For each of the following statements please select the answer that best reflects your views.

1. Feelings of suicide are very common.
strongly disagree strongly agree
2. Suicide should be considered just another form of death.
strongly disagree strongly agree
3. People who commit suicide do not see other options for dealing with their troubles.
strongly disagree strongly agree
4. The person who commits suicide also commits a serious sin.
strongly disagree strongly agree
5. People who commit suicide have serious problems.
strongly disagree strongly agree
6. I think badly of a person who has committed suicide.
strongly disagree strongly agree
7. A person who commits suicide should not be judged.
strongly disagree strongly agree
8. Suicide should be viewed in the same way as death by natural causes.
strongly disagree strongly agree
9. Suicide should be viewed in the same way as death by accidental causes.
strongly disagree strongly agree

10. Suicide is actually a plea for help.
strongly disagree strongly agree
11. The family of a person who has committed suicide should feel ashamed.
strongly disagree strongly agree
12. There is no good reason for someone to commit suicide.
strongly disagree strongly agree
13. I know someone who committed suicide.
strongly disagree strongly agree
14. I enjoy reading about my religion.
strongly disagree strongly agree
15. I go to church because it helps me to make friends.
strongly disagree strongly agree
16. It doesn't matter what I believe so long as I am good.
strongly disagree strongly agree
17. It is important to me to spend time in private thought and prayer.
strongly disagree strongly agree
18. I have often had a strong sense of God's presence.
strongly disagree strongly agree
19. I pray mainly to gain relief and protection.
strongly disagree strongly agree
20. I try hard to live all my life according to my religious beliefs.
strongly disagree strongly agree

21. What religion offers me most is comfort in times of trouble and sorrow.
strongly disagree strongly agree

22. Prayer is for peace and happiness.
strongly disagree strongly agree

23. Although I am religious, I don't let it affect my daily life.
strongly disagree strongly agree

24. I go to church mostly to spend time with my friends.
strongly disagree strongly agree

25. My whole approach to life is based on my religion.
strongly disagree strongly agree

26. I go to church almost every week.
True False

27. I believe in the second coming of Christ.
True False

28. I believe in a life hereafter.
True False

29. I have been inspired to a program of life based on duty which I have since carefully followed.
True False

30. I believe there is a Devil and a Hell in afterlife.
True False

31. I believe there is a God.
True False

Edwards: An Examination of Attitudes

32. Religion gives me no worry.
True False

33. I feel sure that there is only one true religion.
True False

34. Christ performed miracles such as changing water into wine.
True False

35. I pray several times every week.
True False

36. I read the Bible several times a week.
True False

37. I have no patience with people who believe there is only one true religion.
True False

38. Are you Male or Female?

Female

Male

39. What is your age? years.

40. What is your race/ ethnicity?

African-American

Asian

Hispanic

White-not Hispanic

Multi-racial

41. Nationality (country of birth):

42. Religious preference (Christianity, Judaism, Islam, Buddhism, etc.):

43. COMMENTS:

COMPARISON OF INDIVIDUALS PORTRAYED IN PRINT ADVERTISEMENTS IN PEOPLE MAGAZINE AS COMPARED TO HOW THEY ARE PORTRAYED IN TEEN PEOPLE MAGAZINE

Brandie L. Ellison, McNair Scholar

Dr. James Randall, Research Mentor
Marketing Department

ABSTRACT

The purpose of this study is to determine how individuals, or models, are portrayed in contemporary print media. This study is an extension of previous research done on People Magazine by Dr. Randall (2002). This study seeks to compare the roles of models in People magazine to the roles of the models in Teen People magazine. A comparison was done between the male and female models of Teen People to determine if females, who comprise at least 50% of the work force, are portrayed in professional roles versus other types of settings. The same content analysis instrument that was used in the People Magazine study was used to rate advertisements from Teen People Magazine on fifteen different variables. The fifteen variables include the location of scene, content of ad, dominant person, contact, role portrayed, work role portrayed, non work role portrayed, model's relationship, product, estimated age, sexual role female, sexual role male, male model's race, female model's race, and dress of model.

The goal of this study is to determine if models are portrayed in a professional or decorative manner. This study seeks to determine if more men than women are portrayed in professional settings, how individuals in advertisements are portrayed to teenagers, what types of roles adults are relaying to teenagers, if adults are acting responsibly or irresponsibly, and finally how youth are portrayed in advertisements. A comparison will also be done between male and female teenagers to explore trends in print media.

INTRODUCTION

A transformation has occurred in the roles that men and women play in society. Advertising often reflects the underlying views of prevailing attitudes and stereotypes that venture along with these new roles. In the past, critics have claimed that advertisements depict women as mere sex objects. Since magazines often mirror contemporary society, one would hypothesize that sexual roles portrayed by women would have lessened over time, especially due to the increase in women activism (Lysonski, 1983).

The portrayal of men, women, and teenagers in the media continues to be a much-needed topic of discussion. Continuous studies should be done in order to explore trends in gender representation. These trends are only one measure of how society views men, women, and teenagers (Bartsch, Burnett, Diller, and Rankin-Williams). Trends in images seen in the media are intricately tied to the fact that gender representation in the media

can affect people's attitudes and behaviors in society (Geis, Brown, Jennings (Walsedt), & Porter, 1984). One may expect changes to have occurred in media gender representation since the 1970s because other measures of how women and men are portrayed have changed. Women nowadays are more likely to be in the work force and hold jobs that were traditionally held by men. However, other evidence shows that there is little change from gender representation in the 1970s. Equality in measures such as the wage gap and other occupational roles has not occurred (Cejka & Eagly, 1999). Some of the most perplexing and complex debates and issues have stemmed from the question of how to portray women in advertisements (Courtney & Whipple, 1983). Some advertisers fear that traditional stereotypes may not be as effective as they were in the past, hence the more progressive portrayals of women (Courtney & Whipple, 1983).

Since 1992, according to the American Society for Aesthetic Plastic Surgery, plastic surgery by minors has held steady at three percent of two million Americans annually. In addition to these numbers, eleven percent of the nearly 25,000 cosmetic surgeries performed on minors were for "sexy" procedures such as tummy tucks, liposuction, and breast augmentation. The most common procedure of all is the Rhinoplasty, surgery on the nose (Hunker, 2000).

GENERAL BACKGROUND

Young adult's attainment and use of sex stereotypes is a major force behind how they begin to view themselves and others around them. The expectations of sex roles as well as the labeling of one's self seem to influence young adults in areas such as public interactions, professional choices, achievement incentives, and cognitive performance in young children. It is easy for children and young adults to become inhibited by the sex stereotypes established by society and exemplified in the media. Roles that young adults and children view everyday have a major impact on the set of acceptable and unacceptable role behaviors that they allow. Therefore, publicly sustained cultural and stereotypes generate sex role standards (Macklin & Kolbe, 1984). The reasons above are why it is very important for the media and culture to reexamine the messages and stereotypes that are being sent and viewed by the younger generation.

There have been many studies in the last decade over the use of sexual metaphors, suggestive sexual implications, subliminal sex, and the use of nudity (Reidenback & McCleary, undated manuscript). The idea that women are stereotyped in the media is supported by many empirical studies. On the other hand, the interpretations and regularity of these stereotypes has been the basis for ongoing debate (Lysonski, 1983). Over the past 25 or more years, many research studies have been conducted in order to determine the portrayal of men and women in the media. The presence of past research provides comparisons and changes in the eminence of role models young adults monitor in the media (Macklin & Kolbe, 1984). The data reveals some interesting results.

Impressionable adolescents are very susceptible to the barrage of the media. In a recent survey of 4,000 teenagers, nearly 50% of the 14 to 18 year olds reported dissatisfaction with their bodies, and a third of these same teenagers had considered some type of plastic surgery (Tsiu, 2000).

Tsiu (2000) found that of 272 teenage girls that were surveyed online, more than half of the girls admitted to seeing advertisements in the media that made them feel insecure about their bodies, and 68% said that there is too much sexual imagery in today's form of advertisements, compared with 64% of the respondents from the previous year.

In a study conducted by Lysonski (1983) containing the advertisements from 22 different magazines about the female and male portrayals in magazine advertisements, he found that the roles that advertisements in the print media have undergone some changes. The study found that women are less frequently represented as dependent upon men, and that men are less likely to be depicted in advertisements that show sex appeal, dominance over women, and authority figures. According to this study, advertisements were shown as representing women in more career-oriented roles and in non-traditional activities. In spite of the above findings, Lysonski (1983) found that women are still being portrayed as housewives and as being concerned with physical attractiveness. In a similar study conducted by Soley and Kurzbard (1986), a content analysis of sexual portrayals in magazine advertisements during 1964 and 1984 found that the percentage of advertisements with sexual content did not increase over the twenty-year period, but, interestingly enough, the types of sexual portrayals did. This study found that sexual illustrations became more overt, and a transformation occurred with more visual sex than verbal sex being shown between these years.

Macklin & Kolbe (1983) performed a content analysis of 64 television commercials directed towards children. Sex role stereotyping was examined along with previous trends that suggest little change over the past ten years in terms of ad dominance, active/passive behavior, aggressive behavior, voiceovers, and background music. The results show that 60.9% of the commercials were neutral, containing boys and girls, and 63.9% of the advertisements portrayed males as being the dominant character. This study further show that 16.6% of male oriented commercials contained aggressive acts, none of the advertisements containing females showed any type of aggression, and 12.8 % of the neutral commercials showed aggression depicting physical, verbal, and aggressions towards objects.

Bartsch, Burnett, Diller, and Rankin-Williams (2000) replicated the studies of O'Donnell and O'Donnell (1978) to analyze trends in gender representation in television commercials. A total of 757 commercials from the spring of 1998 were analyzed for type of product, gender of the voice-over, and gender of the product representative. Findings indicated that men were underrepresented in commercials for domestic products, and women were underrepresented in commercials for nondomestic products. Findings also revealed a decrease in male voice-overs from around 90% to 71% in comparison to the study done previously by O'Donnell and O'Donnell (1978).

A recent study done by Burke (1999) examines the concept of being a workaholic, which is defined by Spence and Robbins (1992) as a person who is highly involved in work, feels compelled to work because of inner pressures, and is low in enjoyment at work. In this study, mail questionnaires were sent to around 1000 male and 1000 female MBA graduates of a university in Canada in 1996. Responses from around 591 respondents were received and measured for gender differences in a predominantly white managerial sample in three workaholism components and workaholic job behaviors among managers and professionals. The three workaholism components were work

involvement, feeling driven to work, and work enjoyment. This study indicates that females reported higher levels of workaholic job behaviors (perfectionism and job stress) that are likely to be associated with a lower feeling of well-being.

Bretl & Cantor (1988) conducted a study that contained a sample of television commercials that were taken from three major network affiliates in Madison, Wisconsin. The results show that in U. S. television commercials men were more likely to be shown in scenes that are away from home, while women were portrayed in advertisements that took place in the home (Bretl & Cantor, 1988).

PURPOSE

The purpose of this study is to determine how individuals, or models, are portrayed in contemporary print media. This study seeks to determine if more men than women are portrayed in professional settings, how individuals in advertisements are portrayed to teenagers, what types of roles adults are relating to teenagers, if adults are acting responsibly or irresponsibly, and finally how youth are portrayed in advertisements. A comparison will also be done between male and female teenagers to explore trends in print media.

METHODOLOGY

Research Instrument:

A survey was designed based on the works of Soley and Kuurzbard in 1964. The instrument was refined and designed for content analysis. See Appendix A for a copy of the survey. The survey instrument was used to define the roles of models in advertisements. Definitions were developed for each of the terms in order to try and create consistency in analysis. See Appendix B for a complete listing of the terms and definitions used in this study. The first part of the survey dealt with the settings of the advertisements, whether it was in a working or non-working environment. The second part dealt with the roles of the models. For example, were the models in the advertisements portrayed in a professional setting or recreational setting and was the model used strictly as a decoration in the advertisement? Finally, the researcher looked at the type of product and race of the models.

Sample:

In the 2002 *People Magazine*, Dr. Randall analyzed 521 advertisements. For *Teen People Magazine*, Brandie Ellison, using the same criteria, analyzed 214 advertisements for the years 2003 and 2004.

Statistics:

SPSS was used to analyze the data. Chi Square was used to compare differences between Male and Female models of *Teen People Magazine* and Chi Square was used to compare the differences in models in *People* and *Teen People Magazine*.

Hypotheses:

Ellison: Comparison of Individuals

Ho: There is no difference in portrayal of male and female models in *Teen People Magazine*.

Ha: There is a difference in portrayal of male and female models in *Teen People Magazine*.

Ho: There is no difference in portrayal of models in *Teen People Magazine* and *People Magazine*.

Ha: There is a difference in portrayal of models in *Teen People Magazine* and *People Magazine*.

LIMITATIONS

There were a few limitations that were encountered while doing this research project. Firstly, the issues of *Teen People Magazine* were very hard to locate. A three and a half hour trip was necessary in order to find the 2003 and 2004 Teen People Advertisements. This caused a late start on the analysis of the content of the advertisements. The second limitation that was encountered was the availability of two or more people to aid in analyzing the content of the advertisements. People that were asked to analyze the advertisements usually wanted some type of compensation for their time and efforts. Because of this, I had to analyze the content of the advertisements myself. This was the reason for the implementation of concrete definitions of each variable.

RESULTS

TEEN PEOPLE MAGAZINE MALE vs. FEMALE

These tables present the differences in male and female roles portrayed in *Teen People Magazine*. Chi Square was calculated to determine if there was a statistical significant difference at the 95% confidence level. The number of female dominated advertisements were 147 or 68% of the ads; the number of men dominated advertisement were 19 or 9.0% of the ads; and the number of advertisements in which both male and female were equally dominate were 47 or 22.5%.

TABLE 1
ROLE PORTRAYED
REPORTED IN PERCENTAGES

ROLE PORTRAYED	Working	Non Working
Female	2.8	97.2
Male	10.5	89.5
Total	2.9	97.1

McNair Scholars Journal of Georgia Southern University, Vol. 6, 2005

In terms of role portrayed, only 2.8% of the females were shown in a working role while males were shown in a working role 10.5% of the time.

**TABLE 2
NON-WORK ROLE
REPORTED IN PERCENTAGES**

NON WORK ROLE	Professional Athlete	Recreational	Decorative Fashion	Decorative Sexual	Celebrity	Casual	Festive/ Party
Female	0.7	9.3	33.6	21.4	5.0	12.1	17.9
Male	5.9	41.2	11.8	5.9	11.8	11.8	11.8
Equally Dominant	0.0	17.0	38.3	12.8	8.5	4.3	19.1

In terms of non-work role portrayed, females were seen in mostly decorative fashion roles with 33.6% while males were mostly portrayed in recreational roles with 41.2%. When males and females were shown in equally dominate roles in the same advertisement, they were mostly in a decorative fashion pose.

**TABLE 3
DRESS OF MODEL
REPORTED IN PERCENTAGES**

DRESS OF MODEL	Professional	Casual	Partially Clad	Nude	Formal Wear
Female	.7	78.2	13.4	4.9	2.8
Male	10.5	84.2	5.3	0.0	0.0

In terms of the dress of models in *Teen People Magazine*, females were shown in mostly casual attire with 78.2% followed by the partially clad wear with 13.4%. Male models were portrayed mostly casual as well with 84.2% followed by professional attire with 10.5%.

**TABLE 4
ESTIMATED AGE
REPORTED IN PERCENTAGES**

ESTIMATED AGE	Young Adult	Middle Age	Senior/Gray Citizen
Female	93.0	6.3	.7
Male	84.2	10.5	5.3

In terms of the estimated age category, females and males were portrayed as mostly young adults with 93% and 84.2% respectively.

Ellison: Comparison of Individuals

**TABLE 5
CONTACT
REPORTED IN PERCENTAGES**

CONTACT	Platonic	Simple	Intimate
Female	56.7	33.3	10.0
Male	25.0	75.0	0.0
Equally dominant	11.6	74.4	14.0

In terms of contact, females in *Teen People* are mostly scene in platonic relationships with 56.7% while males are portrayed mostly in simple relationships with 75%. Females were also shown 10% of the time in intimate settings while no males were seen in intimate settings.

**TABLE 6
SEXUAL ROLE COMPARISON
REPORTED IN PERCENTAGES**

SEXUAL ROLE COMPARISON	Innocent	Femininity/ Masculinity	Seductive	Neutral
Female	18.3	45.8	26.1	9.9
Male	36.8	42.1	0.0	21.1

In terms of a comparison of sexual roles, females were mostly portrayed as feminine with 45.8% while males were shown as masculine with 42.1%. Females were also shown in more seductive roles with 26.1% while no males were seen in seductive roles.

**TABLE 7
MODEL'S RACE
REPORTED IN PERCENTAGES**

MODEL'S RACE	Black	White	Other	Mixed
Female	5.3	78.9	5.3	10.5
Male	26.3	57.9	5.3	10.5

In terms of the model's race, almost 80% of the females were white. The males used in the advertisements were more balanced racially, with 58% being white and 26% being black. There was a mixture of individuals of both races in the advertisements 10.5% of the time.

**TABLE 8
PRODUCTS
REPORTED IN PERCENTAGES**

PRODUCTS	Cleaning	Food	Beauty	Clothing/ Accessories	Entertainment, media, TV/movies	Telephone Services
Female	1.4	4.2	48.3	30.1	3.5	2.1
Male	0.0	36.8	21.1	5.3	10.5	10.5

In terms of products, females were mostly seen promoting beauty products with 48.3% followed by clothing and accessories with 30.1%. Males were seen promoting mostly food products with 36.8% followed by male beauty products at 21.1%.

**TABLE 9
LOCATION OF SCENE
REPORTED IN PERCENTAGES**

LOCATION OF SCENE	Home	Work	Recreational
Female	11.3	5.7	83
Male	16.7	16.	66.7
Equally Dominant	7.7	3.8	88.5

In terms of the location of the scene, females were seen in mostly recreational settings with 83% while males were seen in mostly recreational settings with 66.7%.

TEEN PEOPLE MAGAZINE vs. PEOPLE MAGAZINE

These tables present the differences in role in *Teen People Magazine* compared to the portrayal of models in *People Magazine*. Chi Square was calculated to determine if there was a statistical significant difference at the 95% confidence level.

**TABLE 10
LOCATION OF SCENE
REPORTED IN PERCENTAGES**

LOCATION OF SCENE	Home	Work	Recreational
People Magazine	42.5	19	38
Teen People	3.4	6.6	82.4

Ellison: Comparison of Individuals

In terms of the location of scene, *People Magazine* portrayed more models in home settings with 42.5% followed by the recreational setting with 38%. *Teen People Magazine* portrayed more models in recreational settings with 82.4% followed by the work setting with 6.6%.

**TABLE 11
DOMINANT PERSON
REPORTED IN PERCENTAGES**

DOMINANT PERSON	Female	Male	Equally dominant
People Magazine	61.4	20.7	17.9
Teen People	68.4	9.1	22.5

In terms of the dominant person category, *People Magazine* and *Teen People* portrayed most of their models as female with 61.4% and 68.4% respectively.

**TABLE 12
CONTENT OF AD
REPORTED IN PERCENTAGES**

CONTENT OF AD	Female alone	Female w/ female(s)	Male alone	Male w/ male(s)	Female(s) w/ male(s)	Female w/ child(ren)	Male w/ child
People Magazine	49.6	4.9	12.6	4.3	16.9	6.1	3.3
Teen People	52.6	16.7	7.2	1.0	21.1	0.5	0.0

In terms of the content of the advertisements, *People Magazine* portrayed mostly female alone advertisements with 49.6% followed by female(s) with male(s) at 16.9%. *Teen People Magazine* portrayed mostly female alone advertisements also with 52.6% followed by female(s) with male(s) at 16.9%.

**TABLE 13
ROLE PORTRAYED
REPORTED IN PERCENTAGES**

ROLE PORTRAYED	Working	Non Working
People Magazine	11.4	88.6
Teen People	2.9	97.1

In terms of the role portrayed, *People Magazine* portrayed most of their models in a non-working role with 88.6%. *Teen People* portrayed most of their models in non-working roles also with 97.1%.

**TABLE 14
CONTACT
REPORTED IN PERCENTAGES**

CONTACT	Platonic	Simple	Intimate
People Magazine	44.3	47.4	8.3
Teen People	29.5	57.7	11.5

In terms of the contact of the models, *People Magazine* portrayed most of their models using simple contact with 47.4% followed by platonic contact at 44.3%. *Teen People Magazine* portrayed most of their models using simple contact with 57.7% followed by platonic contact at 29.5%.

**TABLE 15
NON-WORK ROLE
REPORTED IN PERCENTAGES**

NON WORK ROLE	Homemaker	Recreational	Decorative Fashion	Decorative Sexual	Celebrity	Casual	Festive/ Party
People Magazine	2.2	6.2	21.1	14.0	4.2	42.2	9.8
Teen People	0.0	13.7	32.8	18.1	6.4	10.3	17.6

In terms of the non-work role, *People Magazine* portrayed most of their models in casual settings with 42.2% followed by the decorative fashion role at 21.1%. *Teen People Magazine* portrayed most of their models in the decorative fashion role with 32.8% followed by the festive/party role at 17.6%.

**TABLE 16
MODEL'S RELATIONSHIP
REPORTED IN PERCENTAGES**

MODEL'S RELATIONSHIP	Nurturer	Partner (married)	Romantic Partner	Friendship
People Magazine	23.0	7.9	14.0	45.5
Teen People	1.4	0.0	17.8	79.5

In terms of the relationship of the models, *People Magazine* portrayed most of their models in friendship roles with 45.5% while *Teen People* portrayed their models in mostly friendship roles as well with almost 80%.

Ellison: Comparison of Individuals

**TABLE 17
PRODUCTS
REPORTED IN PERCENTAGES**

PRODUCTS	Food	Beauty	Clothing/ Accessories	Cars
People Magazine	11.2	23.2	8.5	3.1
Teen People	6.7	41.1	31.1	0.5

In terms of the products in the advertisements, *People Magazine* portrayed their models in ads that promoted beauty products with 23.2% followed by food products with 11.2%. *Teen People Magazine* promoted mostly clothing and accessories with 31.1% followed by beauty products with 41.1%.

**TABLE 18
ESTIMATED AGE
REPORTED IN PERCENTAGES**

ESTIMATED AGE	Young Adult	Middle Age
People Magazine	54.5	39.4
Teen People	92.8	5.7

In terms of the estimated age, *People Magazine* portrayed their models as being mostly in the young adult category with 54.5%. *Teen People* portrayed their models also in the young adult category with an outstanding 92.8%.

**TABLE 19
SEXUAL ROLE FEMALE
REPORTED IN PERCENTAGES**

SEXUAL ROLE FEMALE	Innocent	Femininity/ Masculinity	Seductive	Neutral
People Magazine	37.6	28.5	12.6	21.3
Teen People	15.3	49.5	21.1	14.2

In terms of the sexual role female, *People Magazine* portrayed most of their females as being very innocent 37.6% of the time, which was followed by a very feminine portrayal at 28.5% of the time. *Teen People Magazine* portrayed their female models as being feminine almost 50% of the time followed by a very seductive portrayal 21.1% of the time.

**TABLE 20
MALE MODEL'S RACE
REPORTED IN PERCENTAGES**

MALE MODEL'S RACE	Black	White	Other	Mixed
People Magazine	11.1	82.3	1.0	5.6
Teen People	15.3	62.7	5.1	16.9

In terms of the male model's race in *People Magazine*, there models were mostly portrayed as being white 82.3% of the time. In *Teen People Magazine*, there models were portrayed as being white 62.7% of the time.

**TABLE 21
SEXUAL ROLE MALE
REPORTED IN PERCENTAGE**

SEXUAL ROLE MALE	Innocent	Femininity/ Masculinity	Seductive	Neutral
People Magazine	37.2	10.6	6.5	45.7
Teen People	20.7	43.1	8.6	27.6

In terms of the sexual role male *People Magazine* portrayed there models as innocent 37.2% of the time while *Teen People* portrayed there male models as being very masculine 43.1% of the time.

**TABLE 22
DRESS OF MODEL
REPORTED IN PERCENTAGES**

DRESS OF MODEL	Professional	Casual	Partially Clad	Nude
People Magazine	12.4	71.1	8.1	2.6
Teen People	1.4	80.8	11.5	3.8

In terms of the dress of the model, *People Magazine* portrayed there models as being casually dressed 71.1% of the time while *Teen People* portrayed there models dressed more casually 80.8% of the time.

TABLE 23
 FEMALE MODEL'S RACE
 REPORTED IN PERCENTAGES

FEMALE MODEL'S RACE	Black	White	Other
People Magazine	8.9	85.9	2.0
Teen People	10.9	70.8	2.2

In terms of the female model's race, *People Magazine* portrayed there female models as being white 85.9% of the time while *Teen People Magazine* portrayed the female models as being white 70.8% of the time.

CONCLUSION

The results of this study appear to be somewhat consistent with previous empirical studies. There is definitely a difference in the portrayal of male and female models in *Teen People Magazine*. Females are not represented in professional roles nearly as much as males even though females comprise 50% of the work force. For *Teen People Magazine*, females (who are in 90% of the ads) are mostly decorative and less professional in the advertisements. This is an interesting portrayal to today's teenagers. Females are portrayed as mostly non-working, nuder, more intimate, more seductive, and as promoting more beauty, clothing and accessory products. Interestingly enough, if a model was used in an advertisement for food, the model was most likely male. This portrayal insinuates that women should be thin, beautiful, and should always look good.

There is also a difference in the portrayal of models in *Teen People Magazine* as compared to the models in *People Magazine*. Models in *People Magazine* are portrayed in more professional settings. Models in *People Magazine* were seen as less intimate, less seductive, and less feminine or masculine. Interestingly enough, models were seen in *People Magazine* promoting less beauty, less clothing and accessories, but more food products. This could possibly be sending the message to our youth that it is quite normal to be more concerned about appearance and weight issues early on in the life stages. This message alone could be the very reason that many young adults are struggling with the issues of weight, appearance, and the overall dissatisfaction with their bodies.

Society as a whole should definitely be more careful about what is portrayed in all of the media. It is very important to reevaluate the message that beauty is only skin deep. Everyone should lessen the pressure of not eating in order to be a thinner (not necessarily healthier) person. We must all turn around and use the power of the media to change the message that society has sent.

APPENDIX A

Ellison: Comparison of Individuals

MAGAZINE ADVERTISEMENT SURVEY: MEN AND WOMEN'S ROLE PORTRAYAL

1. **MAGAZINE**
var1 1. Time USA
2. Time Denmark
3. Playboy
4. Indonesian Mag
5. Bangladesh
6. Turkey
7. France
8. People USA
9. Teen People
2. **PUBLICATION YEAR**
var2 1. 1990
2. 1970
3. 1950
4. 1980
5. 1960
7. 1992
8. 1993
9. 1995
0. 1998
11. 1999
12. 2000
13. 2001
14. 2002
15. 2004
3. **LOCATION OF SCENE**
var3 1. Home
2. Work
3. Recreational
4. Other(Specify)
4. **CONTENT OF AD**
var4 1. Female alone
2. Female w/ female(s)
3. Male alone
4. Male w/ male(s)
5. Female(s) w/Male(s)
6. Female w/child(ren)
7. Male w/ child(ren)
7. **ROLE PORTRAYED**
8. Male and female w/&
child(ren)
9. Children Alone
5. **DOMINANT PERSON**
var5 1. Female
2. Male
3. Equally dominant
1. Working(go to Q8)
2. Non working(go to Q9)
8. **WORKING ROLE PORTRAYED**
var8 1. High level exec.
2. Professional
3. Entertainers, prof. sports
4. Mid level business
5. White collar
6. Blue collar
7. Soldiers, police
8. Celebrity
9. Superwoman
(Skip to Question 10)
9. **NON WORK ROLE PORTRAYED**
var9 1. Homemaker
2. Recreational
3. Decorative(fashion)
4. Decorative(sexual)
5. Celebrity
6. Casual
7. Festive/party
8. Professional/non-work
9. Athlete
10. **MODELS RELATIONSHIP**
var10 1. Nurturer
2. Partner(married)
3. Romantic partner
4. Not applicable
5. Friendship
6. Rival/Adversary
6. **CONTACT**
var6 1. Platonic
2. Simple
3. Intimate
4. Not applicable

McNair Scholars Journal of Georgia Southern University, Vol. 6, 2005

11. **PRODUCT**
var11 1. Cleaning
2. Food
3. Beauty
4. Drugs
5. Furniture
6. Clothing/accessories
7. Home appliances
8. Charity/funds
9. Travel
10. Cars
11. Alcohol
12. Cigarettes
13. Banks/financial services/credit cards
14. Industrial prod.
15. Entertainment, media, tv/movies
16. Institutional ads
17. Photography
18. Computers
19. Military
20. Telephone services
21. Health
22. Magazines/books
23. Mail services
24. Fuel
25. Retail
26. Hospitality
27. Beverage(nonalchol)
28. Multi-level marketing company
12. **ESTIMATED AGE**
var12 1. Young Adult
2. Middle age
3. Senior citizen/gray
4. Mixed ages
13. **SEXUAL ROLE FEMALE**
var13 1. Innocent
2. Femininity
3. Seductive
4. Neutral
14. **SEXUAL ROLE MALE**
var14 1. Innocent
2. Masculine(macho)
3. Seductive
4. Neutral
15. **MALE MODEL'S RACE**
var15 1. Black
2. White
3. Other
4. Mixed
16. **FEMALES MODEL'S RACE**
var16 1. Black
2. White
3. Other
4. Mixed
17. **DRESS OF MODEL**
var17 1. Professional
2. Casual
3. Partially clad
4. Nude
5. Formal wear

APPENDIX B

LIST OF TERMS

Recreational - This category refers to the location of the scene at which the model in the ad is engaging in some type of entertainment.

Other – This category refers to choice not given.

Dominant Female – The female is portrayed as the position of authority, and/or power.

Equally Dominant – This refers to the situation in an ad in which no model is subordinated by another.

Platonic – This denotes no physical contact.

Simple Contact – This denotes contact in which no sexual references are implied by the contact, such as holding hands or other casual contact.

Intimate Contact – This describes contact in which there is implicit or explicit sexual references.

Working Role – This is a role in which a male or female is portrayed as having a job outside their home.

Non-working Role – This is a role in which the male and female are not portrayed as having a job outside the home.

Executive – This is a job in which the male and female are shown in a top management position and having power and authority.

Professional – This is a job in which the male or female are shown in a “profession”.

White Collar – This is an occupation in which the male or female is portrayed in a position such as a manager or a salesperson.

Blue Collar – This is a job in which the male or female is shown as an hourly wage worker.

Celebrity – This refers to a famous male or female.

Superwoman – This denotes a female who is depicted as being a worker, mother, and mate.

Decorative (fashion) – This refers to a non-working male or female role in which the model is portrayed without sexual connotations to draw attention to the product.

Ellison: Comparison of Individuals

Decorative (sexual) – This refers to the non-working role which portrays the man or woman with sexual connotations.

Nurturer – This is a role in which the model is portrayed as helping another.

Partner (married) – This is the role in which male or female are shown as husband or wife.

Romantic Partner – This is the role in which it is obvious that a man and woman are not married, but do have an intimate relationship.

Not Applicable – This refers to when one is pictured alone in the ad or with others of the same sex.

Young Adults – This is used to refer to the models that are under 30 years old.

Middle Age – This refers to the models who are between 30 and 60 years old.

Senior Citizen – This denotes a model who is over 60 years of age.

Mixed Ages – This refers to the ads that depict multiple models of varying ages.

Seductive – This refers to the provocative, sensuous, and erotic roles.

Neutral – This refers to a model's role in the ad which does not employ feminine, sexual/lustful, or innocent undertones to sell a product.

Mixed race – This refers to the ads that depict multiple models of varying races.

Partially clad – This refers to a model who is partially dressed.

Innocent – No sexuality ascribed (alone, children)

Feminine – An appeal to being distinctly female; stressing female attributes, lifestyle, etc., not sexual

Masculine – An appeal to being distinctly male; stressing male attributes, lifestyles, interest, etc., not sexual

Rivals/Adversaries – Models who appear to be in opposition, competing, adversaries, or rivals.

REFERENCES

- Arnett, M. & Randall J. (2002) Comparison of Sex Roles in Print Advertisements in 2002 Issues of People Magazine.
- Bartsch, R. A., Burnett, T., Diller, T., Rankin-Williams, E. (2000). Gender Representation in Television Commercials: Updating and Update. *Sex Roles*, Nov. 2000. Retrieved May 20, 2005, from the World Wide Web: <http://proquest.umi.com>.
- Bretl, D. J., & Cantor, J. (1988). The Portrayal of Men and Women in U.S. Television Commercials: A Recent Content Analysis and Trends Over 15 Years. *Sex Roles*, 18, 595-609.
- Burke, R.J. (1999). Workaholism in Organizations: Gender Differences. *Sex Roles*, 5/6,333-345. Retrieved June 14, 2005, from the World Wide Web: <http://proquest.umi.com>.
- Caballero, M.J., Lumpkin, J.R., Madden, C.S. (1989). Using Physical Attractiveness as an Advertising Tool: An Empirical Test of the Attraction Phenomenon. *Journal of Advertising Research*, August/ September, 16-22.
- Cejka, M.A. & Eagly, A.H. (1999). Gender-stereotyping Images of Occupations Correspond to the Sex Segregation of Employment. *Personality and Social Psychology Bulletin*, 25, 413-423.
- Cohan, J. A. (2001). Towards a New Paradigm in the Ethics of Women's Advertising. *Journal of Business Ethics*, Oct. 2001. Retrieved May 29, 2005 from the World Wide Web: <http://proquest.umi.com>.
- Courtney, A.E., & Whipple, T.W. Female Role Portrayals in Advertising and Communication Effectiveness: A Review. *Sex Stereotyping in Advertising*, 14, 4-8. Lexington, KY: Lexington Books, 1983.
- Ford, J., LaTour, M., Lundstrom, W. (1991) Contemporary Women's Evaluation of Female Role Portrayals in Advertising. *The Journal of Consumer Marketing*, vol 8, 15-28. Retrieved June 29, 2005 from the World Wide Web: <http://proquest.umi.com>.
- Garst, J., Bodenhausen, G. (1997). Advertising's Effects on Men's Gender Role Attitudes. *Sex Roles*, 36, Nos. 9/10, 551-582. Retrieved May 29, 2005 from the World Wide Web: <http://proquest.umi.com>.
- Geis, F.L., Brown, V., Jennings (Walstedt), J., & Porter, N. (1984). TV commercials as achievement scripts for women. *Sex Roles*, 10, 513-525.
- Hunker, P.G. (2000). Pressure To Be Perfect. *Insight on the News*, 16, 29. Retrieved May 29, 2005 from the World Wide Web: <http://proquest.umi.com>.
- James, W.L. & Kover, A.J. (1992). Observations: Do Overall Attitudes Toward Advertising Affect Involvement with Specific Advertisements?. *Journal of Advertising Research*, September/October, 78-83.
- Kaufman, G. (1999) The Portrayal of Men's Family Roles in Television Commercials. *Sex Roles*, vol. 41, Iss. 5/6, 439-469. Retrieved May 29, 2005 from the World Wide Web: <http://proquest.umi.com>.
- Lande, M. (1982). Self, Sex and Success: New themes for women. *Marketing Communications*, vol. 7, number 6, 23-25.

Ellison: Comparison of Individuals

- Lee, T., & Hwang, F. (2002). Portrayal of Women in Movie Ads Changes Little from 1963-1993. *Newspaper Research Journal*, 23, 86-89. Retrieved May 30, 2005 from the World Wide Web: <http://proquest.umi.com>.
- Leigh, T.W., Rethans, A.J., Whitney, T.R. (1987). Role Portrayals of Women in Advertising: Cognitive Responses and Advertising Effectiveness. *Journal of Advertising Research*, October/ November, 54-63.
- Leslie, L.D., & Fagot, B.I. (1997) Gender Role Socialization and Discipline Processes in One and Two Parent Families. *Sex Roles*, 36, 1/2, 1-11. Retrieved May 29, 2005 from the World Wide Web: <http://proquest.umi.com>.
- Lyonski, S. (1983). Female and Male Portrayals in Magazine Advertisements: A Re-examination. *Akron Business and Economic Review*, 45-50.
- Macklin, M.C., & Kolbe, R.H. (1984). Sex Role Stereotyping in Children's Advertising: Current and Past Trends. *Journal of Advertising*, 13. Retrieved May 27, 2005, from the World Wide Web: <http://proquest.umi.com>.
- Petroshious, S.M., & Crocker, K.E. (1989). An Empirical Analysis of Spokesperson Characteristics on Advertisement and Product Evaluations. *Journal of the Academy of Marketing Science*, 17, 3, 217-225.
- Reidenback, R.E., & McCleary, K.W. (1983). Advertising and Male Nudity: An Experimental Investigation. *Journal of Academy of Marketing Science*, 11, 444-454.
- Richmond, D. & Hartman, T. (1982). Sex Appeal in Advertising. *Journal of Advertising Research*, 53-60.
- Sharits, D. & Lammers, H.B. (1983). Perceived Attributes of Models in Prime- Time and Daytime Television Commercials: A Person Perception Approach. *Journal of Marketing Research*, Feb, 64-73.
- Soley, L. & Kurzbard, G. (1986). Advertising: A Comparison of 1964 and 1984 Magazine Advertisements. *Journal of Advertising*, 15, 46-64.
- Stern, A. (1984) In Search of Values and Virtility. *Marketing Communications*, vol. 9, num 4, 16-21. . Retrieved May 29, 2005 from the World Wide Web: <http://proquest.umi.com>.
- Tsui, B. (2000). Time to Get Real: Teen Girl Survey Rates Advertising. *Advertising Age*, 71, 47. Retrieved May 29, 2005 from the World Wide Web: <http://proquest.umi.com>.

PACING INTEGRATION AT GEORGIA SOUTHERN COLLEGE

Kymerly Jackson, McNair Scholar

Dr. Suellynn Duffey, Mentor
Department of Writing and Linguistics

Abstract

America's classroom was ground zero during the struggles of the Civil Rights era. After the Brown v. Board of Education ruling, public education was then acclaimed the great equalizer. Therefore, academic institutions were mandated to become mediums through which marginalized people could rise above the effects of past discrimination. Integration was easier to court order than physically enforce as protests at the Universities of Mississippi and Alabama illustrate. The research investigates the gradual socialization of African-American students into the Georgia Southern community. The George-Anne campus newspaper is the primary source. Students, faculty, and staff used the school press as a vehicle to inform and persuade readers about the social climate. The conclusion discusses research that investigates experiences and perceptions African-American students have had more recently at Georgia Southern.

Last year was the 40th anniversary of President Lyndon B. Johnson signing the Civil Rights Act of 1964 into law. The media wrote articles and aired stories that featured the commentary of all sorts of individuals from politicians to average citizens. To celebrate the passage of this significant legislation, events were held by cities and schools to remember what occurred in those areas during the movement. In the city of Statesboro, the Georgia Southern University Museum displayed an exhibit entitled "Equal and Exact Justice," which explored the history of Civil Rights in the local area. According to the museum's director, Dr. Brent Tharp, Statesboro "represents more closely the norm of how communities across America struggled with it [civil rights]." ¹ In the non-urban or average communities, desegregation was an affront to traditions, and customs that made separation by race a way of life. This study explores how the institution then known as Georgia Southern College paralleled Statesboro in this struggle dealing with integration. This is a rhetorical analysis of the archived campus newspaper the George-Anne in the ten year period after desegregation occurred in 1965.

Methods

This study is historical and rhetorical because to understand the present and better the future, we must look at the past. Kenneth Burke defined rhetoric as "the use and study of language to form attitudes and influence action."² This study explores the thoughts and actions of those on campus after integration and how the George-Anne reported them. This media directed towards college students was used by writers to inform and persuade readers.

Analysis

Race relations in the United States intensified after the Supreme Court ruled against educational segregation in the land mark case *Brown vs. Board of Education*. Protests, riots, and demonstrations were held as colleges and universities complied. When Georgia Southern accepted 13 African-American students in 1965, the George-Anne did not report any public opposition to the changing demographics of the campus.³ Those who held editorial control decided no mention of their arrival would appear at all. The newspaper portrayed a campus life full of social activities and athletic events for a seemingly all White student body. Only the

appearances of African-American performers at local concerts were the significant mentions of race.

The presence of African-American students in the classroom did not warrant newspaper coverage, but the college's distinction as the first in Georgia to integrate its athletic teams did. The May 5, 1967 edition of the George-Anne displayed a photograph of head coach J.B. Searce with African-American students Roger Moore and Eugene Brown who eventually accepted athletic scholarships to compete as members of the college's 1967-68 basketball team.⁴

Instead of an article, this visual image informed the audience that Georgia Southern's basketball team was about to integrate. In subsequent editions of the newspaper, these African-American students were continually featured in the sports section. For roughly a two year period, African-Americans students only appeared in photographs and articles that covered athletics at the college. The portrayal of these students in the newspaper reflects the stereotypical image of African Americans as chiefly athletes in the college setting.

Further evidence of this stereotype is reflected in a feature entitled "Spotlight on Sports."⁵ The article was a criticism of the civil disobedience by sprinters Tommie Smith and John Carlos who performed fistful black gloved salutes during a medal ceremony at the 1968 Summer Olympic Games in Mexico City. The athletes said the purpose of their actions was to bring international awareness to the Civil Rights Movement in America. The White reporter's negative opinion of their political statement is noticeable in his choice of words. He does not refer to the Smith and Carlos by name, only as "Negro athletes." Their actions are expressed as "needless" and "not [for] the entire Negro athletic body." By using "stammered" and "slurred," instead of the word "said" when quoting the athletes, he implies to the reader that the African-American athletes are unintelligent and inarticulate. The author then writes about the treatment of African-American athletes on college campuses. Clark proclaims "most of the trouble (discrimination) being at the Northern and Western schools. In the South, no major complaints are heard."⁶ He implies that African-Americans in the South, specifically at Georgia Southern College have no reason to protest like the Olympic medalists.

The feature's conclusion was an interview with African-Americans Roger Moore, Eugene Brown, and Charlie Gibbon about their treatment at the school while playing their first basketball season at the college. Roger Moore said he experienced fair treatment, but felt "lonesome." Eugene Brown agreed with Moore concerning fair treatment. He also said "I get the feeling that if I get a good grade . . . the other people think I was given the grade."⁷ Finally, Charlie Gibbon stated "Georgia Southern is perfect for the Negro in playing basketball and getting an education but there is no social life."⁸ All 3 students admitted social isolation, but Brown and Gibbon differed about the educational experience. In Brown's case, he perceived that other students believed he was receiving preferential treatment due to his athletic status. The final question asked if the Olympic protest represented all African-American athletes. Gibbons and Moore believed it did not. Brown said, "I am very proud to be a Black American."⁹

The author's intention in this article was to persuade readers that the Olympic protest was wrong and the college's African-American athletes had no motivation to do likewise. As a result, they were shown as articulate compared to his description of the Olympic athletes. Brown, Gibbon, and Moore generally viewed the college positively, but their statements did suggest they were still separate or isolated. It can be assumed their answers were careful to not create concern among anyone on the predominantly White campus about racial tension.

To address the problems of isolation and other issues faced by African-American students an organization was started. Four students by the names of Micheal Bush, Pauline Simmons, Linda Williams, and Ed Harris founded the African American Club (AAC) in the winter of 1969. The writer of the article, Kirby Waters, wrote the purpose of the AAC was to aid African

American students by “establish[ing] identification and some degree of unity within his environment.”¹⁰ The founding of this club is significant because it was a student initiative, not an effort by an institutionalized multicultural center. During this time period, other student organizations were also making efforts to improve racial relations.

A student group known as the Georgia Southern Action Committee (GSAC) frequently performed community service projects. In February of 1970, the GSAC along with high school students and local residents participated in a litter cleanup at an African American housing project. The article reported “no difficulty other than a brief encounter with the Statesboro police who inquired about the event’s sponsorship.”¹¹ The coverage made note that the predominately white GSAC and African-American residents collaborated well together. Afterwards, one participant made mention about how Statesboro city sanitation ignored their request to pickup the garbage collected.¹² This was found to be the first time the newspaper extensively reported on the service projects of the GSAC. This gives evidence that performing community service in mixed racial company was not a frequent occurrence. The police inquiry and difficulty with local sanitation hints that the actions of the GSAC maybe drew suspicion and disapproval. Less attention may have been paid to the Action Committee, if integration in public life was not unusual.

On campus, the GSAC also had difficulties. A letter to the editor criticized the college Administration for not officially recognizing the organization. Jim Hatfield, the author, believed student government rejected the petition and constitution of the GSAC under private order from college officials.¹³ As a result, the organization could not have access to funding provided by student activity fees. He predicted this would lead to “growing mistrust of the student body towards the motives and intentions of the administration.”¹⁴ Letters and articles by other students gave reasons as to why. For example, student editor Bill Neville wrote that “the GSAC is not a bunch of...dirty-degenerate-hippie-Marxists as those of the bureaucracy fear.”¹⁵ He stated most student organizations would have been “ashamed” to perform service in an African American neighborhood and rather did projects that were more recreational, and came in less contact with needy beneficiaries.¹⁶ On the other hand, the actions and appearance of GSAC members would definitely support suspicions they belonged to the hippie counterculture feared by those in the conservative majority. Also those who advocated integration in any way whatsoever were frequently accused of having Communist or Marxist tendencies while the Cold War was taking place. This controversy over the action committee was one of several factors that resulted in more call for change by students.

During the 1960s, students nationwide became more aware of social and political issues and demonstrated to voice their opinions. Although Georgia Southern was located in a rural area, protests did take place. One march held was motivated by protests at Kent State and President Nixon’s policies concerning the Vietnam War. In the process, it became more focused on campus reforms. Around 400 student and faculty demonstrators participated in the march that was concluded by submitting a list of grievances to then college president John O Edison.¹⁷ Some items on the list dealt with housing reforms, improvement of student services, and governing power of the administration. A direct request was made to recognize the Action Committee. The administration was also asked to hire more African-American professors which was a major concern of the AAC and the issue stayed relevant for some time afterwards. This march was unusual because it addressed a wide range of issues important to various groups. In response, housing policies became more satisfactory for a majority of the students. According to the newspaper, the Action committee never received official acceptance and the group became inactive five years later.¹⁸ The march and work of the Action Committee shows that socially

conscious white students and faculty actively participated with African-American students to initiate a need for change on campus and off.

One month before the march a protest over public speech occurred. In the April 21st edition of the George Anne, the predominately white Kappa Alpha fraternity announced that their annual “Old South Ball” event would take place the upcoming Friday.¹⁹ This event was planned as a “salute to Southern Heritage” where fraternity members would march while dressed in Confederate uniforms across the Georgia Southern campus and conclude the procession by raising a Confederate flag up the campus flagpole located on Sweetheart Circle. A letter to the Editor anonymously gave an account of what occurred during the celebration: “Evidently the Blacks thought this was discrimination. When the KA’s got to the flag pole there were about 20 Negroes [and White students] there with absurd posters but I don’t believe the KA’s meant to undermine the Negroes . . . some member of the KA’s borrowed a fishing pole and raised the flag and read the secession acts... while a young negro woman yelled... but nothing happened and the groups soon disbanded.”²⁰

The student writer, whose name was held by request, supported the Kappa Alphas and disliked the actions of the African-American students. This letter generated a series of response letters which appeared in the following 3 editions of the campus newspaper. Rhetorical experts Barker and Galasinski found in their analysis of opposing ethnic groups, the pronoun ‘we’ is frequently used to reinforce distinction between two groups.²¹ A similarity between their research and the pro-flag and anti- flag student discourse was found. In both situations, a “pattern of discursive representations was used by each group to represent themselves as merely recipients of the “others” negative actions, while being themselves passive and thus blameless.”²² The source of the first letter described the African-American protesters as “riot-prone” and “making a nuisance of themselves.” In the letter’s conclusion, the author states “we (the fraternities) support the basketball players, but there were 2 of our stars at the head of the incompetent riot. We support, yell, and clap for them and they want to fight us....”²³ This illustrates blaming the ‘other’ ethnicity for responsibility of all negativity. In rebuttals by African American students, the language used is identical. Two female protestors responded saying, “We feel obligated in responding to the letter about the KA Flag raising. . . you don’t know what a riot is if you call 20 Black students standing peacefully and holding signs a riot.”²⁴ It can be determined from these statements that each side saw the “other” as the cause of the problem. The fraternity believed their freedom of expression was wrongly fully encroached upon by protestors who as criticized their heritage, thus condemning their identity. The anti-flag demonstrators saw the public celebration as a violation of their right to pursue an education in a non-hostile environment. They deemed the flag as a symbol that promoted hate and hostility towards African Americans.

The different interpretations of the American Civil War by each group are the means to justify their actions and beliefs. In this public debate, where the George-Anne is a rhetorical medium, an anti-flag demonstrator, wrote “the South never had a Confederacy, a lot of imbeciles thought they had an empire.”²⁵ In answer a flag sponsor declared, “How can you state what the Confederacy was or professed to be? I’m sure you were not there.”²⁶ The statements made by both students demonstrate “[past] events are still very much present in the living memory of [the witnesses] and the younger generation[which] quite clearly are formative of identities.”²⁷ This is why integration was complex and occurred slowly. When groups of opposite cultures and backgrounds clash this type of discourse is likely to take place.

The organization of the Confederate flag protest can be credited to the African American Club and they were likely involved in the march. Three members of the AAC (Simmons, Williams, and Harris) authored several of the letters discussing the flag raising. The coverage of

these events by students of the George-Anne staff showed a new commitment to informing the student body about social and political issues.

After the Kappa Alpha flag raising debate and student/faculty march, the newspaper focused more coverage on racial topics. The Confederate flag continued to be a matter of concern. It was mentioned in the first printed article that focused on the African-American experience at Georgia Southern. The front page piece was entitled "Blacks Speak Out."²⁸

The writer interviewed several African-American students on the campus. Like the basketball players previously mentioned, they believed the college was good in academic terms, but lacking in social conditions. Students believed the display of the flag was just one example of how the predominantly white campus fostered a social atmosphere where they were seen as racially inferior and only tolerated. One student was quoted as saying "the majority are prejudiced, they don't want Blacks here, so they don't provide social activities for us."²⁹ Another student suggested the social fraternities and sororities be opened to all. Three months later the newspaper announced that Graydon Wasdon was the first African American student to pledge a social fraternity.³⁰

In response to the article that voiced the opinions of African-American students, an inflammatory letter was written to the editor. The letter attempted to provide answers as to why African-American students experienced racism. It quoted scholars who used scientific racism to theorize the inferiority of those with African descent. One statement said "the white race crossed the evolutionary threshold 200,000 years ahead of the negro."³¹ The authors believed scientific "facts" like this were valid reasons for discrimination towards students of color. After this, a campaign of letters condemned their statements. Most of the responses were written by white students and faculty in support of African Americans on campus. Only one letter praised the inflammatory "scientific" answer.

In spring of 1971, the George-Anne began to print a recurring feature called "Controversy in Black and White." The writer, Pete Thomas, stated he was asked to continue the dialogue started by the "Blacks Speak Out" article. He felt the task difficult because he was of white descent. The students he interviewed expressed "alienation towards the administration and campus" and "indignation" at the administration for ignoring their problems.³² Again the students believed the hiring of African Americans to academic and administrative positions would help alleviate the problem. One student warned that it was "time to wise up" to institutional racism.³³

By 1972, African American students had participated in two documented instances of protest. A progression towards more elaborate and organized protest was foreseeable. That more coordinated protest happened when 38 African American employees of the college staged a walkout after the dismissal of the college's only black administrator, Junius Reed.³⁴

It began when employees formerly under Reed's direction left their jobs and gathered Landrum and Williams Centers cafeteria workers to join in a march to the Administration building. Georgia Southern's administration expressed hope that African American students would not "get involved with the walkout," but around 30 students joined the protest on the steps of the administration building.³⁵

Duncan met the marchers and requested negotiations immediately. The president then met a grievance committee of workers, received a list of reforms, and expressed a need for 3 weeks to consider their proposals because "we [the administration] have never received specific complaints" and "give us a chance before walking out."³⁶ Reforms on the list included wage increases, the hiring of black food service supervisors, and the hiring of black professors. In response, the college president appointed a review board "to investigate the 'non-academic' areas of the protest."³⁷

A few days after the walkout, on the eve of President Duncan's inaugural celebration, the walkout marchers joined with white and African American local residents and formed a local Community Coalition Community that marched through Statesboro to the campus. These demonstrators described their walk as an "appeal to Dr. Duncan to let his inauguration to mark a new era of freedom, justice, and equality for at Georgia Southern."³⁸ For true integration to happen, they believed more African Americans should be at the college as students and faculty to reduce social isolation, therefore making the college a more welcoming environment. Also employment discrimination, as a result of past Jim Crow conditions, had to end.

The review board appointed after the walkout did not address the hiring of black professors. However, on December 5th 1972, the George-Anne reported that Dr. Lane Van Tassell would participate in an exchange program with Dr. Hans Walton from Savannah State College during the 1973 spring quarter. The head of Georgia Southern's political science department said, "it's good that he [Dr. Walton] will be here because it's an opportunity to have a black professor in a way we couldn't have in any other way. He could be the first of a beginning."³⁹ The African American professor was slated to teach a course in "Black Politics."

As the George-Anne slowly evolved into an accurate and inclusive depiction of student life, observations about racial relations became frequent. Newspaper staff member Sally Cotton suggested in an editorial the formation of a multi-racial organization to lessen "a painfully marked separation between black and white students."⁴⁰ In the end of that decade, after integration on campus, the newspaper became more diverse in its coverage. The progression of African American students into student life was reported. For example, Janet Flowers was interviewed after becoming the first African American student elected to a student government position in 1975. She hoped her election would motivate other students of color to participate in more organizations. Flowers felt "they will be particularly watching me because I am black, but I intend to prove myself worthy of the position."⁴¹ Afterwards students of color were shown participating in various activities such as the choir and cheerleading squad. As for Greek life, many African American students felt those organizations still discriminated against them. In turn, several Greek organizations from historically black colleges founded colonies on the campus. The newspaper first announced the arrival of the Alpha Kappa Alpha sorority in 1975.⁴²

During the 1975-76 academic years, Sandra Aaron wrote the "Controversy in Black and White" feature. She discussed how the AAC was the primary and often only focal point of involvement for other African American students. Aaron believed the election of Janet Flowers and the sorority's arrival were mechanisms for students of color to become more involved outside the African American club.⁴³ Her article suggested that more protests like the walkout of cafeteria employees take place.

Conclusion

By the culmination of the 10 year period after integration, the involvement of African American students had grown as shown by the campus newspaper. Those events discussed are prime examples. The results of the research demonstrate that contrary to Georgia Southern's location in a rural area, it was not left out of the political and cultural upheaval of the fifties and sixties. African American students gradually found ways to address social isolation, discrimination, and lack of support systems. Initially, the newspaper's coverage only reflected biased racial ideas. Eventually, the George-Anne was used to influence the student body, especially the "silent majority," about racial disparities. African American students progressed from a one dimensional portrayal as athletes to activists seeking to improve the racial climate on Georgia Southern's campus.

Georgia Southern's path to integration has garnered less attention compared to larger institutions like the University of Georgia (UGA), but the results are noticeably different. The integration of UGA by Charlayne Hunter and Hamilton Holmes in 1961 received attention of the press at all levels, even on -campus. Four student editors were forced to resign from UGA's student newspaper the Red and Black over their controversial editorials in support of integration. One of these students, Bill Shipp wrote, "It was ridiculous that blacks were kept out of the university, when just about every other ethnic group I could think of was here."⁴⁴

The media coverage is not the only way Georgia Southern and UGA differ in the case of integration. In the University of Georgia's case, some believe "[it] has a limited appeal to blacks because of its reputation as a mostly white school."⁴⁵ As of Fall 2004, the University had an African American enrollment of only 5.6%.⁴⁶ Since its desegregation in 1961, African Americans have never comprised over 10 percent of the student body. In comparison, Georgia Southern's enrollment of students of color has steadily increased. African-American students comprised less than 1% of the student population in 1965.⁴⁷ The institution had a 23.3 % enrollment rate of African-American students in the fall of 2004.⁴⁸ Several studies explain as to why African American enrollment is higher at Georgia Southern University.

A 1997 thesis by Ian Arthur King examined the retention rate of African American freshman at GSU a predominantly white institution. He found that the Minority Advisement Program (MAP) was a primary reason for the school's success in retaining these students.⁴⁹ Since 1983, this peer to peer mentoring program operated by the Georgia Southern Multicultural Center provides social and academic support to incoming students of color.

More supporting evidence is the research of Jasmine Johnson. She completed a graduate study that investigated the relationship between student group involvement and isolation felt by African American students at GSU. A questionnaire was used to gather data from 120 randomly selected non-white participants who measured campus involvement, feeling of isolation, and amount of satisfaction felt as a result of membership in student groups. Like King, this research found that higher rates of involvement in campus programs resulted in higher retention rates.⁵⁰ A similar study by Guillory gathered data of campus racial climate perceptions held by African American students and found that overall GSU was viewed positively by minorities.⁵¹

Since the post-segregation era, the institution has improved. The events recorded in the George-Anne show how the campus changed. Georgia Southern has emerged as a leader in attracting and retaining African-American students, but it is not assumed that more progress is not needed. In further research, the use of more primary sources such as interviews and other archived documents from the time period will generate a complete and accurate description of this transformation.

Notes

- ¹ “New GSU Exhibit Examines the History of Segregation,” Savannah Morning News 2 February 2004. 25 May 2005 http://www.savannahnow.com/stories/020204/LOC_gsuseg.shtml
- ² Kenneth Burke, “What is Rhetoric.” The Rhetorical Tradition. Ed. Patricia Bizzell, Bruce Hertzberg, Boston: Bedford, 2001. 1295-96.
- ³ Registrar, Office of the Registrar, Student Enrollment Report 1965 (Statesboro: Georgia Southern University, 1965).
- ⁴ Currie, Clyde. “Search Entertains CAGE Prospects.” George-Anne 5 May 1967: 11.
- ⁵ Clark, Mike . “Spotlight on Sports.” 25 October 1968: 10.
- ⁶ Clark 10.
- ⁷ Clark 10.
- ⁸ Clark 10.
- ⁹ Clark 10.
- ¹⁰ Waters, Kirby . “African American Club Effective.” George-Anne 17 October 1972: 1.
- ¹¹ Tice, David. “Action Assists Neighborhood Center.” George-Anne 3 March 1970: 7.
- ¹² Tice 7.
- ¹³ Hatfield, Jim. “Letter to the Editor.” George-Anne 10 March 1970: 5.
- ¹⁴ Hatfield 5.
- ¹⁵ Neville, Bill “And That is Something.’ George-Anne 3 March 1970: 4.
- ¹⁶ Neville 4.
- ¹⁷ “Students and Faculty March.” George-Anne 26 May 1970: 1-2.
- ¹⁸ “After the Protest How Much Change.” George-Anne 3 April 1975: 7-9.
- ¹⁹ “Old South Day.’ George-Anne 21 April 1970: 8.

- ²⁰ “Letter to the Editor.” George-Anne May 1970: 9.
- ²¹ Chris Barker, Darius Galasinski, Cultural Studies and Discourse Analysis, (London: SAGE, 2001) 132.
- ²² Barker, Galasinski 133.
- ²³ Letter 9.
- ²⁴ “Blacks Defend Flag Protest” 12 May: 5,11.
- ²⁵ Blacks Defend 11.
- ²⁶ “Letters to the Editor: Black and White Continued” 19 May 1970: 5.
- ²⁷ Barker, Galasinski 129.
- ²⁸ Parker, Stewart J. “Blacks Speak Out”. George-Anne 22 February 1971: 1.
- ²⁹ Parker 1.
- ³⁰ “TKE Breaks Color Barrier” George-Anne 4 May 1971: 8.
- ³¹ “Letter: Answer to Blacks” George-Anne 1 March 1971: 5.
- ³² Thomas, Pete. “Controversy in B & W: Smiles Have Worn Out”. George-Anne 2 February 1972: 9.
- ³³ Thomas 9.
- ³⁴ “38 Blacks Stage Walkout” 28 March 1972 : 1,3.
- ³⁵ Blacks Walkout 3.
- ³⁶ Blacks Walkout 3.
- ³⁷ Blacks Walkout 3.
- ³⁸ “Community Coalition Set March for Inauguration Eve” 4 April 1972:1.
- ³⁹ “Black Exchange Prof to Teach at GSC” 5 December 1972 :2.
- ⁴⁰ Cotton, Sally “ Multi-Racial Club Suggested.” George-Anne 10 October 1974: 4.

- ⁴¹ ‘G-A Profile: Flowers on Her New Post’ 24 April 1975: 6.
- ⁴² “New Sorority Formed Here” George-Anne 13 November 1975: 7.
- ⁴³ Aaron, Sandra “Blacks at GSC Move Forward”. George Anne 5 February 1976: 8.
- ⁴⁴ Robert A. Pratt, We Shall Not Be Moved (Athens,: U of Georgia Press,2002) 122.
- ⁴⁵ “University of Georgia Scrambles for Black Students,” CNN 7 June 2003, 23 May 2005
<<http://www.cnn.com/2003/EDUCATION/06/06/black.recruits.ap/>>.
- ⁴⁶ Board of Regents, University System of Georgia, Semester Enrollment Report Fall 2004 (23 Nov.. 2004, May 22 2005 < <http://www.usg.edu/sra/students/enroll/fy2005/fall04.pdf>> 5-6.
- ⁴⁷ Georgia Southern College Registrar 1965.
- ⁴⁸ Board of Regents 2004.
- ⁴⁹ Ian Arthur King, Relationship Between Participation in the Minority Advisement Program and Student Retention and Achievement, 1997, MA thesis, Georgia Southern University (Statesboro: Georgia Southern University, 1997) 39.
- ⁵⁰ Jasmine D. Johnson, Black Students on a White Campus: The Relationship Between Student Group Involvement and Feelings of Isolation, 2002, MA thesis, Georgia Southern University (Statesboro: Georgia Southern University, 2002) 15.
- ⁵¹ Gary A. Guillory, African American Students’ Campus Racial Climate Perceptions at a Comprehensive Regional University in the Southeast, 2004, diss., Georgia Southern University (Statesboro: Georgia Southern University, 2004) ix.

The Economic Impact of Splash in the Boro Water Park on Bulloch County, Georgia

Holly Marie Larsen, McNair Scholar

Professor Dr. Drew Zwald, Research Mentor
Department of Hospitality, Tourism, and Consumer Sciences

Abstract

The purpose of the present research was to evaluate the impact of non-Bulloch County residents' direct sales expenditures due to Statesboro-Bulloch County Parks and Recreation Department's (SBCPRD) Splash in the Boro water park. The water park was in the planning stage for ten years and was finally open for operation during the summer of 2004. The study will help the SBCPRD plan their future budgets and new innovations within the park. The study measured demographics, consumer perceptions, and sales. The specifically designed instrument was distributed to 236 water park participants during eight consecutive days in June, 2005. The direct sales expenditures of participants at Splash in the Boro were the targeted data. The economic impact data were analyzed utilizing SPSS and the IMPLAN model; the results may help recommendations for future planning. The direct sales expenditures that were placed in the IMPLAN model generated an impact on output and employment. The IMPLAN model suggested that the expenditures of visitors at Splash in the Boro have created between 18 and 41.2 full-time jobs in Bulloch County, Georgia. In addition to jobs, the output impact was between \$645,910 and \$1,390,586. The estimates of impact varied because the researcher analyzed the impact of all visitors (locals included), nonlocals and time-switchers, and isolated nonlocals who visited Bulloch County, Georgia primarily for Splash in the Boro.

Keywords: *Economic Impact Analysis, IMPLAN Model*

1. Introduction

An economic impact study measures the economic return to the resident¹. The economic impact study has a reputation of being manipulative because, more times than not, the study will present numbers that are misleading or not true due to misapplications of impact². A consultant will usually report numbers that a client wants³. The results are meant to sway the public or influence the audience³. For example, the numbers may include local residents and other groups of people that, according to professionals, should be excluded. In a study conducted by Douglas McCartha, he excluded local fans to produce the total expenditure output and employment impact⁴. McCartha stated that the "out-of-town spending is the important contributor to the economic base of the (Gamecocks) football team⁴." John Crompton, Texas A&M University faculty, wrote numerous articles that explain the five inviolable principles. The inviolable principles that Crompton has outlined are (1) exclusion of local residents, (2) exclusion of "time-switchers" and "casuals", (3) use of income rather than sales output measures, (4) use of multiplier coefficients rather than multipliers, and (5) careful interpretation of employment measures¹. If a local entity wishing to determine the economic impact of its facility, event, or service provided on the community under investigation abides by these five inviolable principles, the data gathered should assist the entity with some or all of the following: a) determining future

Larsen: The Economic Impact of Splash in the Boro

costs and expenditures to assist with annual pro forma budgeting requirements, b) the development of a demographic profile of the entity's "core" consumer, c) the execution of a targeted marketing plan based on the development of a consumer profile; potentially increasing attendance and sales numbers and employment opportunities and d) the generation of goodwill among local residents and politicians. Therefore, the purpose of this study was to investigate the economic impact *Splash in the Boro* had on sales and employment figures in Bulloch County, Georgia and to attempt to determine which of the previously stated outcomes has been or will be satisfied.

The concept of the study is that the more nonlocal residents that are attracted to a community through the means of a park, tournament or etc., the more new money is injected into the community. New money in the economy is recorded as net new. This study will use three out of five of Crompton's specified five inviolable principles, excluding principles three and five. Principle three was excluded because the objective of this study was to determine the sales impact on the community rather than the impact on residents' income. Principle five was excluded because the objective of this study was to determine the impact of *Splash in the Boro* on "total" jobs created rather than analyzing the quality (i.e., full-time, high paying) of the jobs. According to principle one, nonlocal expenditures should be analyzed and interpreted not local resident expenditures¹. The local resident expenditures represent a recycling of money that already existed in a community. Crompton's principle two applies to time-switchers and casuals that are groups of people who come to a community for other means than the purpose of the study¹. Time-switchers are people who are visiting an area for other reasons and plan their trip around another entertainment incentive. One would see this more often with a sports team and their respective game schedule. Casuals are those who would have visited the community regardless of the attraction, more than likely spending their time shopping, working, or on some other form of entertainment. Both groups' expenditures would have occurred regardless of the presence of the attraction¹. The group of people that excludes locals, time-switchers, and casuals will be referred to as the isolated nonlocal.

Dennis Howard and John Crompton stated that an economic impact study measures the return through direct expenditures (sales), income, employment or value added⁵. The study will usually look at three different effects, the direct, indirect, and the induced⁵. The direct effect is the first round of effects of visitor spending, which may be the purchase of the hotel room or food¹. The indirect is a ripple effect of additional rounds of economic activity¹. The induced is a further ripple effect which could be employee compensation, proprietary income or other property income¹. The numbers are totaled and a multiplier is applied to determine the total economic impact of the attraction on the community. An example of the multiplier concept is that for every dollar spent in the community only \$.60 may stay in the community. The other \$.40 is leaking out of the community in the form of savings, outside vendors, taxes, etc.

The purpose of this research was to evaluate the impact of nonlocal resident expenditures (sales) due to the presence of a local water park, *Splash in the Boro*. Construction on the \$5.2 million Water Park - funded by a Special Purpose Local Option Sales Tax, or SPLOST, approved in March 2002 - began in October 2003. *Splash in the Boro* was one of three alternatives. The park charges Bulloch County residents, Military, and Senior Citizens a discounted price for admissions and season passes. Bulloch County residents received a discount because of the SPLOST. During the summer of 2004, the first summer of operation, *Splash in the Boro* had over 90,000 visitors and total sales were \$771,658.49. The overall numbers were above expectations and after one year of operation, sales reached \$1,000,000.00. The family

aquatic center offers a lazy river, three water slides, a play, leisure, therapy and competitive pool, lots of shade, a concession stand, and a gift shop. The Water Park also houses the desired capacity of patrons and creates a high economic return⁶.

Family aquatic facilities like *Splash in the Boro* have been developing throughout the United States⁷. *Splash in the Boro* was one of three alternative facilities proposed by SBCPRD that provided family oriented activities with a swimming environment⁶. The feasibility study conducted before the park was constructed included over 12 comparable parks. The parks had strong factors affecting the attendance levels. They included the diversity of attractions, the entertainment value of the attractions, the special and functional relationships of those attractions to each other, the overall aesthetics and user comfort of the park, and the synergism between elements for the various age groups⁶. The park did not have a demanding theme that tends to lead to more money spent on the aesthetics than the quality of the park and it may also limit future developments for the park⁸. Regardless of a theme the water park trend is still rapidly changing the dynamics of the average public swimming pool. In Chicago there are several municipally owned water parks that public officials like because they are revenue generators⁷. In Woodridge, Ill., the community planned to renovate a community pool but looked at alternative methods, such as the trend of water parks⁹. The profits generated varied from community to community. Rockford's Magic Waters Water Park generated a \$1.2 million profit in 1992 while Bolingbrook's water park never broke-even⁷. The profits may be contributed back to the community in the form of but not limited to employment, salaries, and taxes. *Splash in the Boro* is owned and operated by SBCPRD. In an interview, Mike Rollins (personal communications, May 24, 2005), SBCPRD park director was quoted "The Bulloch County public swimming pools were in need of work and few alternatives existed. We decided to go with the new trend and invest in a water park. *Splash in the Boro* will be open year round and the profits earned will be supplemented into other areas of the Parks and Recreation Department along with *Splash in the Boro's* budget." This data may benefit future plans of investments for SBCPRD and other prospective businesses. It is recommended that the park conduct an economic impact study every year so that there may be comparable information and data that may help improve the operation of the park. The park's goals are not profits, but to satisfy the local residents. The park offers a place for the family to enjoy wellness, leisure, and sport activities without the high cost of amusement parks. The park will be able to move forward with different development plans based on the results of this study.

2. Methodology

2.1 Participants

The convenience sample for the present study included representatives from families/groups and individuals that entered *Splash in the Boro* during eight days in June 2005. This time period coincided with the students' summer vacation and management felt this would be an effective time to communicate with a wide variety of customers. Patrons at the park were surveyed because they represented the targeted market that attended the park and discretionary expenditures within Bulloch County. Participation in the study was voluntary and promptly made to the participant before the survey was conducted. The participants completed the survey at the water park facility once approached by a surveyor. The participant held the right to cease the survey process at anytime and refuse to answer any of the questions. All information

Larsen: The Economic Impact of Splash in the Boro

gathered was anonymous. The results were presented to Statesboro-Bulloch County Parks and Recreation Department in group form.

2.2 Instrumentation

The economic impact questionnaires used components of the 2005 MCI Heritage and the Fed Ex St. Jude Golf tournaments' questionnaires. Data gathered as part of both questionnaires were used to analyze the economic impact of the event on the community. The 23 item survey included participant's expenditures in Bulloch County, the value of their visit, and demographics. The survey instrument was pilot tested by Georgia Southern University professors and employees at SBCPRD. The validation of the survey instrument was tested by associate professors at Georgia Southern University.

2.3 Procedure

Prior to data collection, the survey instrument and study procedures were approved by the Georgia Southern University Institutional Review Board. The primary researcher discussed the consent cover letter to each participant before administering the survey. Participants were informed that by completing the survey the data collected would be evaluated, utilized, and published by the Statesboro-Bulloch County Parks and Recreation Department for future recommendations and the primary researcher's organization. To encourage simple, brief, and precise information the participant had the choice between the researcher reading the questions of the one page survey and marking their responses or completing the survey themselves. All surveys were administered by three trained researchers on a consecutive eight day basis during June 2005.

2.4 Data Analysis

The quantitative data gathered were put into the **Impact Analysis for PLANning** model (IMPLAN). This model is a static input/output economic impact model that can analyze impacts geographically at only one specified point in time¹⁰. The model includes over 500 industrial sectors of business that the flow of money may intersect. The results provided the SBCPRD an estimated total impact (direct, indirect, and induced) on employment and sales output with specific exclusions. A direct effect is the initial injection of funds into the economy. Indirect effects include the backward linkages to the suppliers for the water park and maintenance companies. Induced effects are a spin-off effect that is acknowledged in a person's compensation. The total impact is the summation of direct, indirect, and induced effects. A multiplier is the ratio of the change in income to the initial change in expenditure that brought it about. The action of the multiplier can be illustrated by the sequence of events that follows the initial injection. The multiplier is an essential feature of the simple income-expenditure model¹¹.

3. Results

There is no comparison information available/located for the study at the present time. The survey collected demographic information to have a better understanding of the typical domestic traveler to *Splash in the Boro*. The domestic traveler is one who travels 30 miles or more for an event/occasion. A multiplier as applied to the expenditures results to track the flow of net new dollars in the economy of Bulloch County. Data was collected from 236 visitors at *Splash in the Boro* during eight consecutive days of June 2005.

Questions 1-2 requested the location of his/her county of residency and if he/she held a season pass. If the participant was from Bulloch County, he/she only completed questions 1 and 7-15. Bulloch County residents' expenditures were not needed. The nonlocal participants' counties included the neighboring counties of Bulloch which are Screven, Effingham, Bryan, Evans, Emanuel, Candler, and Jenkins (n=59, 25.3%). Other counties identified were in Georgia and out of state (n=71).

Question 3 requested the number of members traveling in each group or family. The number of people in each group varied from 1-33 people, with group sizes of 1-10 people comprising 68.9% (n=118) of the sample. The group number represented the number of people, including the person being surveyed, that the participant was financially responsible for. The largest group at the park included in the survey was 33 people. The group's number may be indicative of the type of group at the Water Park such as a day camp, church or birthday party.

Table 1. Separate expenditure categories and average expenditure for the Isolated Nonlocal individuals.

Isolated Nonlocals								
	Admissions	Concessions	Merchandise	Lodging	Food	Transportation	Shopping	Entertainment
Total	\$2,680.75	\$1,003.75	\$281.00	\$552.00	\$374.00	\$482.00	\$184.00	\$14.00
No. of Responses	76	76	76	76	76	76	76	76
Average	\$35.27	\$13.21	\$3.70	\$7.26	\$4.92	\$6.08	\$2.42	\$0.18
Percentage	48%	18%	5%	10%	7%	8%	3%	0%

Group Size (#of people)	5.96
Duration (# of days)	1.1
Average Expenditure	\$73.05
Per Person Expenditure	\$12.26
Per Person- Per Trip	\$11.14 (-\$7.50)
Amount Not Spent at Park Per Person	\$3.64

Question 4 included statements about expenses respondents incurred at the park and in Bulloch County during his/her visit. There were 106 Bulloch County participants and 130 nonlocal participants. The expenditure section (question 4) asked for an estimated total in certain areas. The first section was strictly *Splash in the Boro* expenses. The categories were Admissions, Concessions, and Merchandise. The totals were similar to the real numbers

Larsen: The Economic Impact of Splash in the Boro

averaged during the summer of 2004, the first summer *Splash in the Boro* was in operation (See Table 1).

The categories that covered the Bulloch County area were Lodging, Transportation, Food/Beverage, Shopping, Entertainment, and Other. The percentage totals for the isolated nonlocal were 48% Admissions, 18% Concessions, 5% Merchandise, 10% Lodging, 7% Food/Beverage, 8% Transportation, and 3% Shopping. The average per-person-per-trip was \$11.14 (See Table 1). The nonlocals were asked to complete question 5 because their expenditures could still be eliminated if they were time-switchers or casuals. Question 5 determined that 57.8% of nonlocals came primarily for *Splash in the Boro*. The nonlocals group that excludes the time-switchers and casuals will be known as the isolated nonlocal.

Questions 6-11 were marketing questions placed in the survey instrument to better inform SBCPRD of its perceived consumer value. Questions 12-15 asked the demographic breakdown of the average eighteen or older patron at the water park. The race of participants that completed the survey were white 82.7% (n=191), black 13.4% (n=31), and Hispanic/Bi-racial 3.5% (n=8) people. The ages ranged from 18 to above 70 (n=234); the average age was between 30 and 39 (n=97). Females (n=178) made up 75.4% of the total group. Bulloch County, Georgia encompasses Georgia Southern University; therefore, the population includes a non-industrialized population (college students) that skews the average household income. Household income levels reported were not similar to Bulloch County census. Therefore, the data collected would be misleading and will not be stated.

5. Conclusion

The purpose of the study was to produce data from the isolated nonlocal to be utilized for operational and marketing purposes by SBCPRD. The isolated nonlocal is a non-Bulloch County patron at *Splash in the Boro*, whose primary purpose for the visit was to attend *Splash in the Boro*. Their expenditures in Bulloch County were averaged and analyzed using IMPact analysis for PLANing. The software program ran the numbers through 528 sectors of business in Bulloch County. The program was able to compute an appropriate multiplier coefficient while isolating Bulloch County as the only area of impact. IMPLAN estimated that *Splash in the Boro* would create only 18 total jobs and \$645,910 output in Bulloch County as shown below.

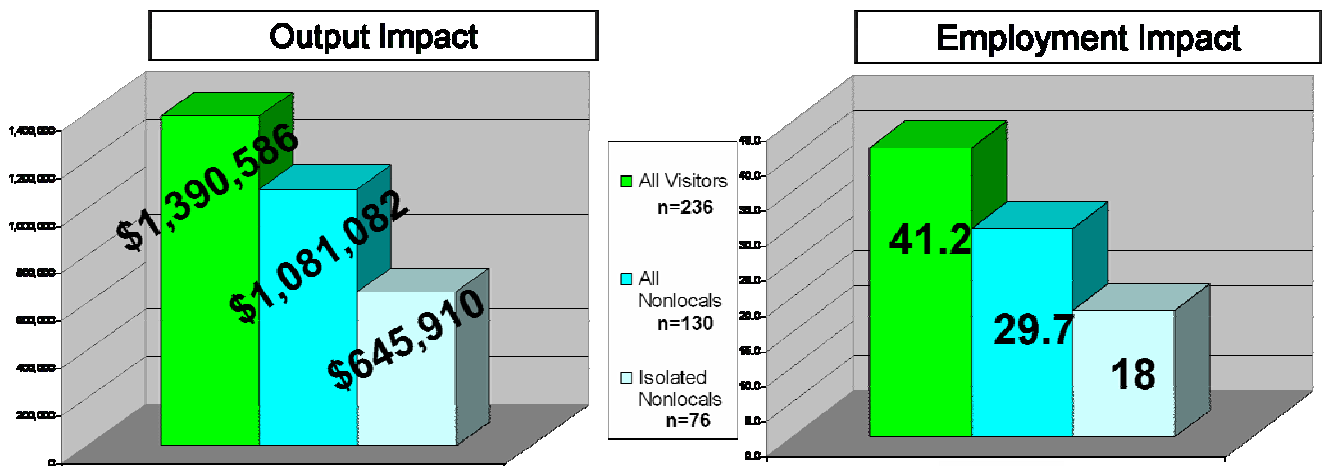


Figure 1. Economic Impact

Figure 1 All visitors included every participant that was surveyed. All the nonlocals included the time-switchers and casuals. The Isolated nonlocals excluded the time-switchers and casuals. The results indicate that by including all visitors the economic impact misleads the reader into believing that the Water Park has generated over 40 full-time jobs and \$1 million in economic activity. The purpose of the study was to calculate the appropriate economic impact when misleading information has been excluded from the data.

The Water Park has created net economic activity. This report was not formulated to influence investors or residents. Therefore, the presentation of all data is relevant and the author is not trying to persuade people one way or another. Overall, the park has and will continue to influence the community. If the same output continues in the community, the residents may see their total investment returned to them in a little over nine years (\$5,200,000 divided by \$645,910). The park is more than a revenue generator. As long as the SBCPRD continues to use the appropriate resources, it will continue to flourish and offer many people a break from the hot Georgia summers.

The scope of this research may have limited the data and, therefore, produced unrealistic results. The results may also be limited because this is the primary researcher's first endeavor in economic impact analysis. The results should be viewed with at least a 2% error margin. As stated earlier, there are other principles that one must adhere to when conducting an impact analysis. Future implications would be an economic impact study that should analyze personal income rather than sales expenditures. The data gathered would be exact and the totals would not be misleading. The park will probably be the deciding factor for families and businesses considering relocating. One should also look at the amenity that the Water Park has supplied. Crompton stated that "People [are] frequently willing to pay a larger amount of money for a home located close to these types of areas...¹²." Parks spark a desire to live close to amenities that may benefit a family. A research topic could focus on how water parks become that deciding factor to relocate or spend more money for property. The other questions that were on the survey instrument, but not examined for this research could be used to develop a strategic plan and/or marketing plan for *Splash in the Boro*.

6. Acknowledgements

The author wishes to express her appreciation to Dr. Drew Zwald (Georgia Southern University), Dr. Tony Lachowetz (Georgia Southern University), Jeremy Hill (Georgia Southern University), Chad Avret (Statesboro-Bulloch County Parks and Recreation Department), Dr. Bill Norman (Clemson University), and Dr. John Crompton (Texas A&M University).

Larsen: The Economic Impact of Splash in the Boro

7. References

1. Crompton, J. (1999). *Measuring the Economic Impact of Visitors to Sport Tournaments and Special Events* (pp. 15-28). Ashburn, VA: Division of Professional Services National Recreation and Park Association.
2. Hudson, I. (2001). The use and misuse of economic impact analysis. *Journal of Sport and Social Issues*, 25(1), 20-39, 37.
3. Sterngold, A. (2005). The economic impact and feasibility game. *American Planning Association*, 71, February, 32-34.
4. McCartha, D. (2002). It pays to win. *Business & Economic Review*, 49(1), October-December, 3-12.
5. Howard, D. R. & Crompton, J. L. (2004). Principles of economic impact analysis. In *Financing sport*, (2nd ed.), pp. 103-160. Morgantown, WV: Fitness Information Technology, Inc.
6. Markey and Associates, Inc. (1997). *Community Center/Aquatic Center Master Plan, Part I Aquatic Feasibility: 1997, July*. Unpublished consultant report. Kennesaw, GA.
7. Cleaver, J. (1997). Pools gold: Hottest neighborhood amenity keeps park districts, contractors swimming. *Crain's Chicago Business Chicago*, 20(18), May, 13.
8. Dixon, T. (2004). The theme dream sprayparks. *Parks & Recreation Department Arlington*. 39(6), June, 40-44.
9. Wade, B. (1998). Making a splash in local recreation. *The American City & County*, 113(10), 20-31.
10. Bureau of Business Research and Economic Development. (2004). *The Economic Impact of Tourism in Bulloch County, Georgia*. Retrieved May 24, 2005, from <http://livingoak.org/olate/uploads/upload-1118255054-Bulloch%20Tourism%2001-26-04.pdf>
11. Pearce, D. (1992) The MIT Dictionary of Modern Economics 4th ed. *MIT Press: Library of Congress Cataloging*, 292-293.
12. Crompton, John. (2001). The impact of parks on property values: A review of empirical evidence. *Journal of Leisure Research*, 33(1), First Quarter, 1-31.

8. Appendix A

Splash in the Boro Economic Impact Analysis Survey:

We are conducting a study on behalf of the Statesboro-Bulloch County Parks and Recreation Department. The study will be looking at the economic impact of *Splash in the Boro*. You must be 18 or older. You don't have to take this survey, and you can stop at any time. We won't be using your name or any other information that would report your answers. If you have questions about this survey, you can call me or my advisor, or you can call the IRB at Georgia Southern University. Thank you for participating.

Official Use Only
Date ____/____/2005
ID Survey No. _____

1. What is your county of residency? _____ (If Bulloch County SKIP to Question 7)
2. Are you a season ticket holder? Yes No (If Yes, SKIP Admissions category in Question 4)
3. How many people are in your immediate group? _____
4. During the course of your visit, what is the approximate amount your immediate group will spend in Bulloch County in each of the following categories:
- | | |
|---------------------------|---|
| Splash in the Boro | |
| Admissions | \$ _____ |
| Concessions | \$ _____ |
| Merchandise | \$ _____ |
| Lodging | \$ _____ (Overnight accomadations) |
| Food/Beverage | \$ _____ (Non-Splash in the Boro purchases) |
| Transportation | \$ _____ (Non-Splash in the Boro parking, gas, etc.) |
| Shopping | \$ _____ (Non-Splash in the Boro material purchases) |
| Entertainment | \$ _____ (Non-Splash in the Boro movies, mini golf, etc.) |
| Other | \$ _____ |
- Note: Expenses incurred while in Bulloch County.
5. Would you have come to Bulloch County today if *Splash in the Boro* was not here?
 Yes No
6. How many days did you stay in Bulloch County during this visit? _____ days
7. During this current visit, which day(s) did you visit *Splash in the Boro*? (Check all that apply)
 Monday Tuesday Wednesday Thursday Friday Saturday Sunday
8. Including this visit, how many times have you been to *Splash in the Boro*? _____
9. On a scale of 1-10, 1 being the lowest and 10 being the highest, rate the price of your ticket for the park. _____
10. On a scale of 1-10, rate your level of satisfaction for your money at the park. _____
11. How did you hear about *Splash in the Boro*?
 Newspaper Radio Word-of-Mouth T.V.
 Brochure Internet Mail Friend/Relative
 Other, please describe _____
12. Race? Black Hispanic Other
 White Bi-racial Refused
13. Gender? Male Female
14. How old are you?
 18 - 29 40 - 49 60 - 69
 30 - 39 50 - 59 70 or older
15. Total household income in 2004?
 Less than \$14,999 \$25,000 - \$34,999 \$45,000 - \$54,999 \$65,000 - \$74,999
 \$15,000 - \$24,999 \$35,000 - \$44,999 \$55,000 - \$64,999 Greater than \$75,000

THE LIMITED ENROLLMENT OF MINORITY STUDENTS AT CHARTER CONSERVATORY FOR LIBERAL ARTS AND TECHNOLOGY

Phillip M. Lee, McNair Scholar

Dr. Godfrey Gibbison, Research Mentor
School of Economic Development

Abstract

This study examines why minority students are so disproportionately represented in the student population at Charter Conservatory for Liberal Arts and Technology (CCAT). CCAT's information shows that minority students compose twelve percent of the student population while minorities compose forty percent of Statesboro's population. Charter school stratification could occur if state law does not dissuade resegregation. Furthermore, the Hoxby 2004 study shows that on average a charter school student is benefited by having a charter alternative. I divided Statesboro into four tracts with CCAT at the center. A convenient random sample was administered within those tracts to understand what parents know about CCAT and how they perceive the school. All surveys were entered into the SPSS software for analysis. The results show that lack of knowledge about the charter school was the primary reason for parents not sending their children to the school. In addition, most parents say public transportation and reduce-cost lunch are important benefits of the public schools. Information gathered in this study will give local educators help in devising a program to include minority children.

STATEMENT OF PROBLEM

There are six public elementary schools in Statesboro: Julia P Bryant, Langston Chapel, Mattie Lively, Mill Creek, and Sallie Zetterower. Each school has a district and the children of that district are allotted to that particular school with the parents having little to no input into where their child is educated. The majority of Statesboro's children attend these public elementary schools.

Statesboro has one charter school located in the division two area. A charter school is a public school that operates according to the conditions of a charter or contract. They are sponsored by the local board of education and the charter is granted by the State Board of Education. However, if the local board of education denies the charter petitioner (which could be a private individual, private organization, local school, public local or state entity that submits a petition for a charter) the State Board of Education may still grant a charter for a state chartered special school. The local charter, Charter Conservatory For Liberal Arts and Technology, is a state chartered special school and is one of three in Georgia. There are a total of thirty-seven charter schools in the state of Georgia. These schools are bound by their contract to be held accountable for meeting performance objectives detailed in their charter. Charter schools are also known for their flexibility and innovation in teaching children.

Lee: Limited Enrollment of Minority Students

There are many local minority children that do not fair well in traditional public schools. Many of these children live in poverty in non-traditional families or households where the income is less than twenty thousand dollars annually. The area surrounding the charter school is also prone to have a high rate of unemployment. That puts these children at-risk of educational abandonment. They will be more at risk of dropping out of school and not becoming a contributing member of society.

PURPOSE OF RESEARCH

The purpose of my research is to understand why there is such a limited enrolment of minority students at Charter Conservatory For Liberal Arts and Technology (CCAT). I want to understand why the minority enrolment is only a small percentage of the school's enrollment, even though the school is within close proximity to a large minority community. There is a need for enriched educational opportunities targeted to at-risk children in the community. Statesboro has a fifty-six percent Caucasian population and a forty percent African American population; however, these percentages do not reflect Charter Conservatory For Liberal Arts and Technology's eleven percent African American enrollment and its eighty-eight percent Caucasian enrollment. Since the charter school is located in the division two area, it is surprising that it is stratified so drastically from its surrounding area or from the traditional public schools within a one and one half mile radius. Since charter schools have free enrolment to the general public, it is not clear why the percentage of minority students who attend this school is so low.

REVIEW OF RELEVANT LITERATURE

In this section, I will review literature related to my research question: The low minority enrollment at Charter Conservatory For Liberal Arts and Technology. There have been limited studies done on the enrollment behaviors of Bulloch county minorities in charter schools. I will attempt to note aspects of different literature that is relevant to minority enrollment in non-traditional schools. I have chosen the following studies for these reasons: location plays an intricate part in charter schools enrollment, segregation of charter school students, and comparing charter schools to public schools.

Henig and MacDonald

In Henig and MacDonald's (2002) study, they found that charters are more likely to be located in areas with high proportions of African American and Hispanic residents than in predominantly Caucasian neighborhoods. Charters are also more likely to locate in middle income neighborhoods where home ownership is high. Overall, they found that Charters will locate where need is the greatest. The Charter Conservatory For Liberal Arts and Technology is located at 149 Northside Drive in the division two area of Statesboro, an area with a predominantly African American population and a relatively low rate of home ownership.

This study looked at both sides of the market for charters locational decisions. The supporters of charter schools are those who believe that market forces will direct

charters toward low-income families, help children who are not supported by the public schools, and give aid to economically challenged families that are unable to send their children to private schools because of the tuition. Opponents argue that profit maximization is the driving force behind charter schools' market behavior. Plus, they believe profit will push charter schools to target already financially advantaged families whose children would be less costly to educate.

Henig and MacDonald believe consumer demand may be exceeded by the availability of buildings and accessibility. The proximity to more or more desirable, customers will hinge on suitable buildings, affordable prices, and locations where transportation is decent for students and staff. Contextual factors and institutional design may dictate charter schools supply-side behavior and why they are in the location they are in.

Cobb, Glass, and Crockett

Charter Conservatory for Liberal arts and Technology has 11% African American enrollment, an 88% Caucasian enrollment, and a 1% Hispanic enrollment which is why the evaluation of charter school ethnic/racial stratification is important to my research. Casey Cobb, Gene Glass, and Carol Crockett's (2000) study focused on stratification among charter schools in Arizona, California, and Michigan, which currently enroll over half of all charter school students of the United States and houses half of the nation's charter schools [in 2000]. They found that ethnic and racial stratification does exist within charter schools. They believe that charter schools in neighborhoods that are ethnically and racially diverse are contributing to the segregation in the public schools.

In their evaluation, Cobb, Glass, and Crockett discussed the importance of state laws in keeping the charter schools from resegregation. Arizona laws do not require schools to maintain ethnic or racial balances. California, on the other hand, requires ethnic and racial compositions to resemble that of the sponsoring district. While in Michigan, charter schools ethnic and racial make-up must reflect that of its surrounding area. They also found that the various types (e.g., at-risk charter schools, urban charter schools, grassroots charter schools, parent-led, teacher led and entrepreneur-initiated) of charter schools can be problematic when considering stratification.

Cobb, Glass, and Crockett's study found that charters could be selective, especially start-ups, of the parents and students they enroll. They named three criteria that charters could control to dictate who could be enrolled in the school. First, the charter could limit its size which will directly affect its enrollment. Second, they could narrow their curricular scope to attract and/or target certain types of students. For example, in Arizona, there is a predominantly white charter school in an ethnically diverse neighborhood because its mission promised young Mormons a school tailored to them. Third, start-ups can choose their geographic location. They also cite research that indicates that mandatory parental involvement can serve to be exclusionary and give the school considerable control over the types of students they enroll. CCAT requires parents to donate three hours a month to the school.

Hoxby

Three traditional public elementary schools are within close proximity to CCAT: Julia P Bryant Elementary is 1.3 miles from Charter Conservatory For Liberal Arts and Technology, Mattie Lively Elementary is also 1.3 miles away, while Sallie Zetterower Elementary is 1 mile away. In the study by Caroline M. Hoxby (2004), she compares the proficiency of reading and mathematics to those students in neighboring schools. This study is unique because it covers ninety-nine percent of charter school students in the United States. In her study she found that charter school students were four percent more likely to be proficient in reading and two percent more likely to be proficient in math, on their state's exam. Moreover, charter schools where the nearest traditional public school has a similar racial composition has a five percent greater chance of being proficient in reading and three percent greater chance of being proficient in math. Georgia charter schools are found to have at least one statistically significant advantage in a subject.

Hoxby finds that the average charter school student is benefited from having a charter school alternative. However, there are states, like North Carolina, that have charter school students with more inferior performance in both reading and math than students in traditional public schools. Texas also has charter students that perform statistically significantly less proficient in math, but not in reading.

Hoxby uses the National Assessment of Educational Progress (NAEP) in 2002-2003 of fourth grade students and their state tests. This study included every state that had students in the relevant grade level, which equated to thirty-six states and the District of Columbia. Hoxby indicates that proficiency levels change, depending on the state, and charter students are always compared to traditional students who face the same proficiency standards.

METHODOLOGY

The area around Charter Conservatory For Liberal Arts and Technology (CCAT) was divided into four parts, each corresponding roughly to a US Census Bureau census tract. Within these tracts, a specific number of homes, whose number will remain consistent throughout all four sections, were selected to administer surveys to the families and children in these homes. Participants in this survey will include one or both parents/guardians and all children of the household, if any, at no less than fourth grade level and/or age seven.

The survey will include approximately sixty participants, which will be divided equally among the tracts. The survey will be a convenient random sample of residents who live in close proximity to CCAT in each tract. In order to protect the confidentiality of the child and parent, a number will appear on all information recorded during the study. I also plan to interview the founder of CCAT, Dr. Kathy Harwood.

I will use empirical articles for reference and correlations. I will also use census data that was provided by Jeremy Ryan Hill, Assistant Director, Bureau of Business Research and Economic Development at Georgia Southern University.

Results

With a total of thirty-two surveys complete, combining the four tracts, I accumulated the following statistics and findings. The average home has 2.4 children with the parent being on average thirty-seven years old. When administering my convenient surveys, two out of every three parents I surveyed were female. In these tracks, the average age of a mother having her first child is twenty-one. Furthermore, forty-five percent of parents had their first child before the age of twenty. I also found that seventy-five percent of the children in these areas rode the bus to school while the remaining twenty-five percent rode with parents or guardians.

The reasons why there are so few minority students at the charter school is still a subject that should be explored. I found that sixty-seven percent of the parents and children have heard of CCAT. However, seventy-five percent of the parents never considered sending their child to the charter school. Seventy-three percent of parents knew the location of CCAT and what CCAT was, but they knew nothing of the operations or purpose of CCAT.

In these impoverished tracks that surround CCAT, transportation to school and the provision of lunch at school proved to be very significant in reducing the direct and indirect costs of sending a child to school. Fifty-four percent of the parents I surveyed said transportation was absolutely necessary and seventy-one percent believes the school should provide the lunch.

To see the importance of transportation and lunch to these parents bear in mind that the highest median household income of the four tracts is twenty thousand dollars.¹ The median family in the poorest tract has annual income of a mere thirteen thousand dollars. So, providing lunches daily and transporting children to school would raise the opportunity cost of schooling for these parents by requiring additional financial resources and requiring them to significantly reallocate their time. If the charter school provided transportation and lunch, it would help alleviate some of the direct and indirect costs that would fall on parents who wish to send their children to that school.

¹ This number is actually being skewed by the fact that this tract includes ten families with annual household income that exceeds two hundred thousand dollars.

Conclusion

Parents are not sending their children to CCAT for the following reasons. There are a lot of parents that never really considered taking their child out of public school and enrolling them into the charter school. Some parents are satisfied with public schools but the majority I surveyed are looking for an alternative and are unaware of the charter school. A large reason for this is due to the lack of information about CCAT to its surrounding population. These parents who have considered CCAT as an alternative to the traditional schools do not know the schedule, policies, or requirements of the charter, therefore let their child remain in the public schools.

Parents who are aware of the requirements and policies feel the opportunity costs are too high. Many of these non-traditional homes, where the single parent has more than one child, cannot afford directly or indirectly the costs of CCAT. These parents send their children to a school that is more accessible and beneficial to their economic standing. Since CCAT does not provide transportation or lunch, many parents in these tracts find it to be a strain directly and indirectly.

References

Bohte, J. (2004). Examining the impact of charter schools on performance in traditional public schools. *Policy Studies Journal*, Vol. 32 Issue4. Retrieved May 19, 2005, from http://www.galileo.usg.edu/cgi-bin/homepage.cgi?_cc=1&_id=8da52eac-1208042690-5864

Frankenberg, E. & Lee, C. (2003, September 5). Charter schools and race: A lost opportunity for integrated education. *Education Policy Analysis Archives*, 11(32). Retrieved May 19, 2005, from <http://epaa.asu.edu/epaa/v11n32/>.

Halsband, R. (2003, November/December). Charter Schools. *Journal of housing & community development*, Vol. 60 Issue 6. Retrieved May 19, 2005, from http://www.galileo.usg.edu/cgi-bin/homepage.cgi?_cc=1&_id=8da52eac-1208042690-5864

Henig, J.R. & MacDonald, J.A. (2002, December). Locational decisions of charter schools: Probing the market metaphor. *Social Science Quarterly*, Vol. 83, Number 4. Retrieved May 17, 2005, from http://www.galileo.usg.edu/cgi-bin/homepage.cgi?_cc=1&_id=8da52eac-1208042690-5864

Reyes, A. (2000, September/December). Alternative education: the dark side of education or new tools for Latinos to achieve self-actualization. *Bilingual Review*, Vol. 25 Issue 3. Retrieved May 18, 2005, from <http://search.epnet.com/login.aspx?direct=true&db=aph&an=6602039>.

BIOLOGICAL INVESTIGATIONS OF NEWLY SYNTHESIZED DRAGMACIDINS

Trianna R. McCall, McNair Scholar

Dr. C. Michele Davis McGibony, Mentor
Chemistry

Abstract: Several biologically interesting bis(indole) alkaloids have been isolated from a variety of marine sponges due to their wide range of biological activities such as inhibitors of protein phosphatases (PP1 and PP2A) and pharmacological activities such as anti-viral and anti-cancer agents. Our laboratory initially focused on the bis(indole) alkaloid's ability to inhibit protein phosphatases, specifically PP1 and PP2A. Protein phosphatases PP1 and PP2A are also two of four subunits of serine/threonine specific phosphatases useful in the dephosphorylation process, which is a key mechanism in regulating biological activity of many human proteins. Alkaline phosphatase and its substrate para-nitrophenyl phosphate (pNPP) were utilized as an analogue in a series of *in vitro* assays. Ammonium vanadate was used as an initial inhibitor to the alkaline phosphatase and pNPP analogue assays before 3,6-di(3-indolyl)sarcosine anhydride, a synthesized bis(indole) alkaloid, was introduced. These assays served as preliminary trials before the future use of a more expensive serine/threonine protein phosphatase kit. A serine/threonine kit was chosen because over ninety-eight percent of all protein phosphorylation occurs on serine and threonine residues. The following report summarizes the results concerning assay studies conducted to test the protein phosphatase inhibiting ability of these synthesized bis(indole) alkaloids, in particular, those most related to dragmacidins.

Introduction

Since the 1980's interest in the chemistry of marine sponges has gradually increased due to the usefulness of the bis(indole) alkaloids they contain. Over past years these potent naturally occurring products have been found to exhibit a variety of biological and pharmacological properties including anti-tumor, anti-viral, anti-bacterial, and anti-inflammatory activities.¹⁻⁶

Topsetins, nortopsentins, rhopaladins, and dragmacidins are all among the array of marine bis(indole) alkaloids being researched worldwide.¹ The present report summarizes research concerning assay studies conducted to test the protein phosphatase inhibiting ability of synthesized 3,6-di(3-indolyl)sarcosine anhydride, a compound derived during the ongoing synthesizing process of dragmacidins.

Dragmacidins

The dragmacidin family is a series of products extracted from a variety of marine sponges comprised of the head-to-tail assembly of two indole units. The pyrrole of the first indole is always directly bonded to a piperazine ring, while the pyrrole of the second

indole bonds it to the rest of the structure. So far researchers have been able to isolate a total of seven dragmacidin products: dragmacidin, dragmacidin A, dragmacidin B, dragmacidin C, dragmacidin D, dragmacidin E, and dragmacidin F.¹ (See Table I.)

Dragmacidin was first isolated in 1988 by McConnell and co-workers from the deep-water sea sponge (sp.) *Dragmacidon*. An analysis of its structure revealed a new class of indole alkaloids obtained from marine life. Today dragmacidin has been useful in partially inhibiting the following cancer cell lines in *in vitro* assays: P388 (leukemia), A-549 (human lung), HTC-8 (human colon), and MDAMB (human mammary).^{1,4}

Dragmacidin A and dragmacidin B were isolated from the Pacific Ocean sponge *Hexadella* sp., collected off the British Columbian shore by Anderson and Morris in 1990. These metabolites, with topsentin C, became the first bis(indole) alkaloids isolated from sponges to have identical 6-bromo substitutions on both indole units. There is question of the actual origin of these compounds. Scientist even question as to whether dragmacidins A and B are true metabolites of *Hexadella* sp. But despite these issues, dragmacidin A has shown *in vitro* cytotoxicity in L1210 leukemia cell line assays. Dragmacidin B has remained inactive.¹

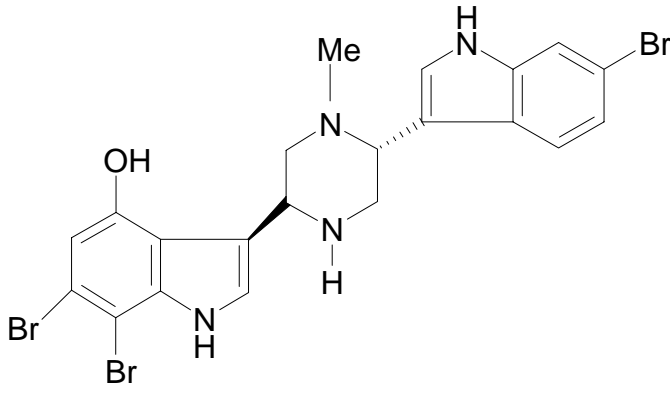
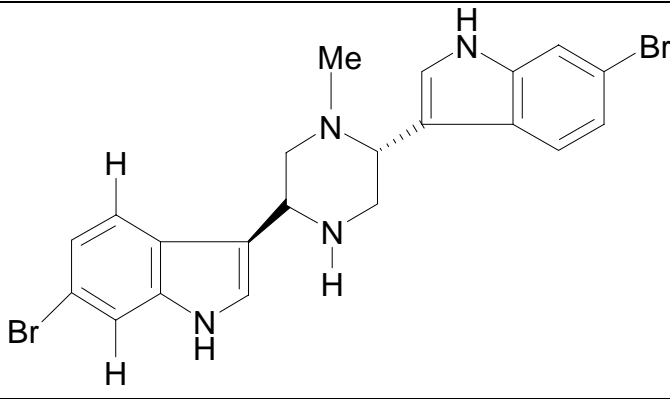
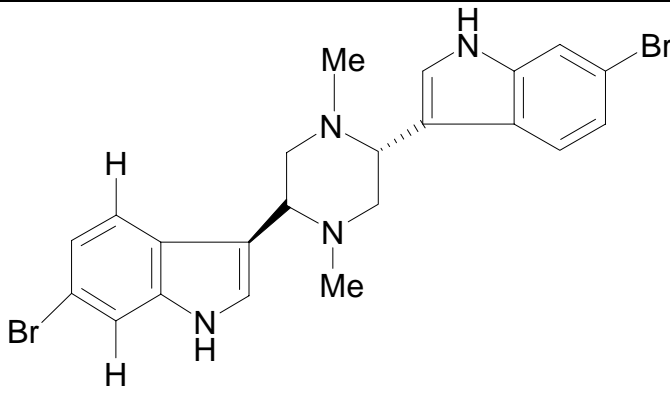
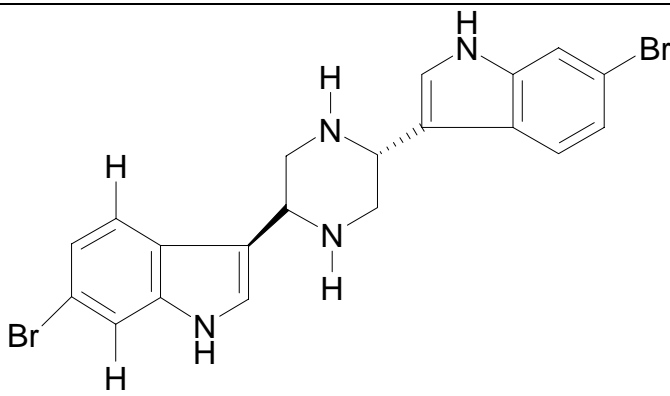
In 1991 Faulkner and co-workers isolated dragmacidin C from *Didemnum candidum* collected in the southern parts of the Gulf of California. Other bis(indole) alkaloids have been isolated from *D. cadidum* as well.¹

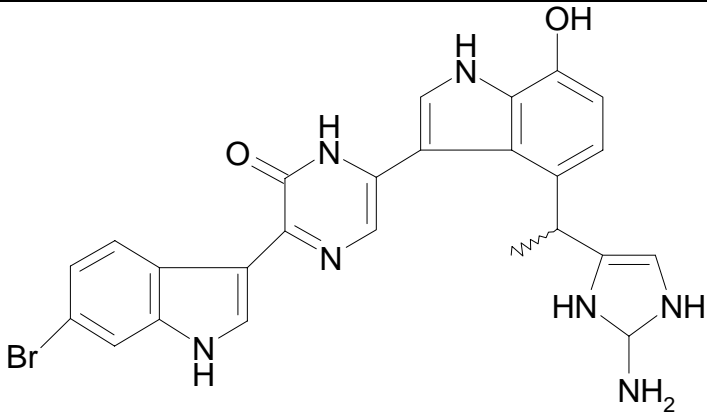
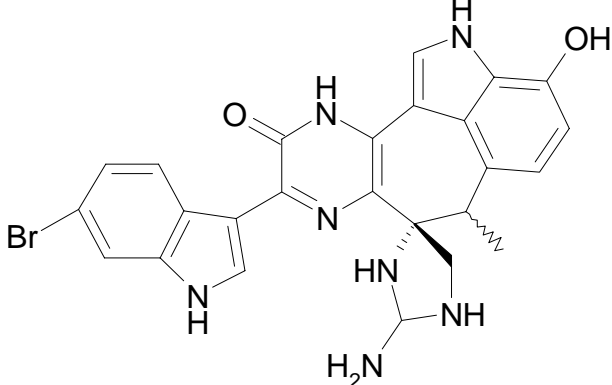
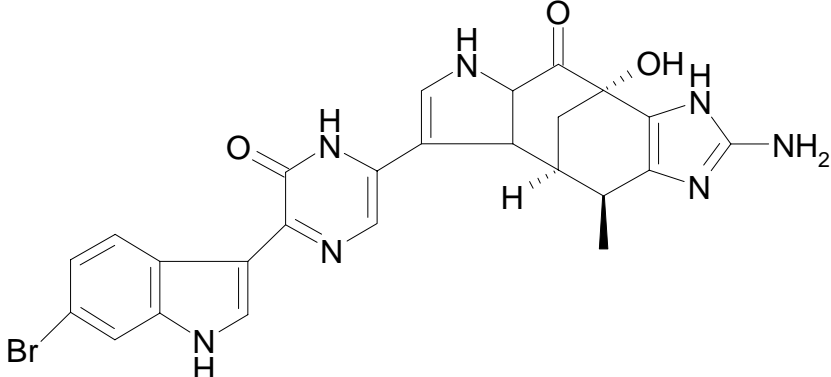
Dragmacidin D and E were both isolated from *Spongisorites* sp. Their unique structure varies from that of dragmacidin and dragmacidin A-C because of the further oxidation of the piperazine ring. Dragmacidin D was the first bis(indole) compound derived from marine organisms to have alkyl substitution on C-4 of an indole ring. It was also the first to incorporate the 2-aminoimidazole functionality and the first to have the 2(1H)-pyrazinone spacer.^{1,3}

Dragmacidin D demonstrates several traits that are biologically useful. Dragmacidin D inhibits *in vitro* replication of *feline leukemia virus* (FeLV). It has antimicrobial activity, inhibits the neural nitric oxide synthase (bNOS), and also inhibits *in vitro* growth of P388 murine and A-549 human lung tumor cell lines. Both dragmacidin D and E are potent inhibitors of serine-threonine protein phosphatases. Dragmacidin D is selective of PP1, while dragmacidin E inhibits PP1 and PP2A. And dragmacidin D and E are solely responsible for the antibiotic character of *Spongisorites* sp. extract and observed protein phosphatase inhibition.^{1,3}

The last known dragmacidin, dragmacidin F, was extracted from *Halicortex* sp. collected off the Coast of Ustica Island, Italy by Ricco and co-workers. Due to its structure, it is believed to be closely related to dragmacidin D. Its anti-viral properties (anti-HSV, anti-HIV) and anti-inflammatory activities make it just as effective.^{1,2}

Figure 1. Dragmacidin Structures

Dragmacidin Type	Structure
Dragmacidin	
Dragmacidin A	
Dragmacidin B	
Dragmacidin C	

<p>Dragsmacidin D</p>	 <p>The structure of Dragsmacidin D features a central pyrimidopyrimidinone core. It is substituted with a 5-bromo-1H-indol-3-yl group at the 2-position, a 5-hydroxy-1H-indol-3-yl group at the 4-position, and a 2-amino-1H-imidazol-5-yl group at the 6-position. A wavy line indicates a chiral center at the 5-position of the pyrimidopyrimidinone ring.</p>
<p>Dragsmacidin E</p>	 <p>The structure of Dragsmacidin E is similar to Dragsmacidin D but with a different stereochemistry at the chiral center. It features a 5-bromo-1H-indol-3-yl group at the 2-position, a 5-hydroxy-1H-indol-3-yl group at the 4-position, and a 2-amino-1H-imidazol-5-yl group at the 6-position. The wavy line at the 5-position indicates a chiral center with a different configuration than in Dragsmacidin D.</p>
<p>Dragsmacidin F</p>	 <p>The structure of Dragsmacidin F is a more complex derivative. It features a 5-bromo-1H-indol-3-yl group at the 2-position, a 5-hydroxy-1H-indol-3-yl group at the 4-position, and a 2-amino-1H-imidazol-5-yl group at the 6-position. The central pyrimidopyrimidinone core is further substituted with a methyl group and a hydroxyl group, and has a carbonyl group at the 1-position. Stereochemistry is indicated with wedges and dashes.</p>

Serine/Threonine Protein Phosphatases and Inhibitors

The phosphorylation and dephosphorylation of regulatory proteins in the body is a major intercellular control mechanism governed through protein kinases and protein phosphatases. In past years much research has been conducted towards the understanding of protein kinases and the role it plays in signal transduction. As a result scientists have been able to develop numerous kinases inhibitors as effective therapeutic agents. But only recently have scientist began to focus on protein phosphatases and the potential effectiveness of protein phosphatase inhibitors.^{5,6}

Protein phosphatases are enzymes that remove phosphate groups that have been attached to amino acid residues of proteins through protein kinases. This dephosphorylation process is a key mechanism in regulating biological activity of many human proteins that affect a variety of cellular processes such as protein-protein

interactions, gene transcription, cell-cycle aggression, and apoptosis.^{5, 6} Presently there are three known major classes of protein phosphatases: serine/threonine specific, tyrosine specific, and dual specificity phosphatases.⁶ Furthermore, because over ninety-eight percent of all protein phosphorylation occurs on serine and threonine residues, serine/threonine specific phosphatases have become a keen interest in the world of drug discovery.⁵

Serine/threonine residues are classified into the four main subunits of PP1, PP2A, PP2B, and PP2C. While PP1, PP2A, and PP2B have similar primary amino acid sequences, PP2C is structurally distinct and is therefore placed in a completely different gene family. PP4, PP5, PP6, and PP7 are other known protein phosphatases.^{5, 6} Today inhibitors of these protein phosphatases have been useful in the treatment of malignancy, diabetes, immunosuppression, cystic fibrosis, asthma, and even cardiovascular disease.⁶ Dragmacidin D and E can be counted among the useful protein phosphatase inhibitors due to their inhibiting ability of the serine/threonine residues PP1 and PP2A.^{1, 3}

Experimental

General

The pH of the Trimza buffer was measured using a Scholar 425 pH meter. Spectral data was obtained using the Shimadzu UV-2404 PC UV-Vis Recording Spectrophotometer. A Protein Phosphatase Analogue Assay System was used in the analysis of the inhibition capabilities of synthesized dragmacidin type material. The alkaline phosphatase, Trimza buffer, and *para* nitrophenyl phosphate were all obtained from Sigma.

Experimental material

Ammonium Vanadate was used as a trial inhibitor of *in vitro* assay before a bis(indole) alkaloid, a dragmacidin type material, synthesized by Professor Christine Whitlock's Research Group, of Georgia Southern University, was introduced.

Preparation of Experimental Solutions

Two liters of 0.05M Trimza buffer solution was prepared with a pH of 10.4. The molecular weight of Trimza is 121.1g/mol. Based on calculations, 12.1g of Trimza were dissolved in two liters of distilled H₂O. NaOH and HCl were added to the buffer until pH equaled 10.4.

Approximately 500mL of a 3M NaOH solution was prepared from a concentrated 12.5M NaOH solution. 120mL of 12.5M NaOH was added to 380mL of distilled H₂O.

Exactly 15mL of a 0.002units/ μ L of alkaline phosphatase enzyme was prepared. The phosphatase enzyme came in 2.0units/mg of solid. Based on calculations, 0.015g of phosphatase enzyme solid was dissolved in 15ml of distilled H₂O.

A 0.076M *para* nitrophenyl phosphate (pNPP) solution was prepared daily. The molecular weight of *para* nitrophenyl phosphate is 263.1g/mol.

Approximately 500mL of 0.01M ammonium vanadate solution was prepared by dissolving 0.5849g of ammonium vanadate in distilled H₂O. The molecular weight of ammonium vanadate is 116.98g/mol. Heat was required for the compound to completely dissolve.

Twenty milliliters of 0.011882M 3,6-di(3-indolyl)sarcosine anhydride solution was prepared by dissolving 0.0885g of 3,6-di(3-indolyl)sarcosine anhydride in 20mL of water. The molecular weight 3,6-di(3-indolyl)sarcosine anhydride is 372.426g/mol. The solution was filtered.

Ammonium Vanadate Experimentation

An *in vitro* assay consisting of eight test tubes in triplicates was conducted for a control and three inhibitions of 10µL, 25µL and 50µL of 0.01M ammonium vanadate respectively. The volume of 0.076M pNPP substrate varied from 100µL-750µL per tube and the volume of pNPP and buffer together totaled to 1480µLs (See Table 1). Exactly 20µL of 0.002 units/µL phosphatase enzyme, 0.01 M ammonium vanadate, as indicated, and 50µM Trimza Buffer were added to each test tube. After five minutes, the substrate was added and another fifteen minutes were allotted for the enzyme to hydrolyze the substrate. Then 200µL of 3M NaOH was added to each test tube in order to stop the reaction. Finally the absorbance of the solutions was taken at 404nm using the Shimadzu UV-2404 PC UV-Vis Recording Spectrophotometer. This assay was conducted twice. The second trial allowed 15 minutes rather than five for the binding of the inhibitor and enzyme.

Table 1. This table gives a breakdown of the substrate/buffer volume per tube for the first trial of the ammonium vanadate analogue assay.

Tube	µL of pNPP	µL of buffer
1	100	1380
2	174	1306
3	255	1225
4	342	1138
5	435	1045
6	534	946
7	639	841
8	750	730

After the analysis of the data obtained from the first two trial analogue assays, another set of assays were performed. This time an *in vitro* assay consisting of seven test tubes in triplicates was conducted for a control and two inhibitions of 25µL and 50µL of 0.01M ammonium vanadate respectively. The volume of 0.076M pNPP substrate varied from 174µL-750µL per tube and the volume of pNPP and buffer together totaled to 1480µLs (See Table 2). 20µL of 0.002 units/µL phosphatase enzyme, 0.01 M ammonium vanadate, as indicated, and 50µM Trimza Buffer were added to each test tube. After fifteen minutes, the substrate was added and only eight minutes were allotted for the enzyme to hydrolyze the substrate. Then 200µL of 3M NaOH was added to each test tube in order to stop the reaction. Finally the absorbance of the solutions was taken at 404nm using the Shimadzu UV-2404 PC UV-Vis Recording Spectrophotometer.

Table 2. This table gives a breakdown of the substrate/buffer volume per tube for the second trial of the ammonium vanadate analogue assay.

Tube	μL of pNPP	μL of buffer
1	174	1306
2	255	1225
3	342	1138
4	435	1045
5	534	946
6	639	841
7	750	730

3,6-di(3-indolyl)sarcosine anhydride Experimentation

After the ammonium vanadate inhibitions were completed an *in vitro* assay consisting of four test tubes in triplicates was conducted for a control and an inhibition of 25 μL of a 0.011882M 3,6-di(3-indolyl)sarcosine anhydride respectively. The volume of 0.076M *para* nitrophenyl phosphate (pNPP) substrate varied from 174 μL -750 μL per tube and the volume of pNPP and buffer together totaled to 1480 μL s (See Table 3). 20 μL of 0.002 units/ μL phosphatase enzyme, 0.011882M 3,6-di(3-indolyl)sarcosine anhydride, as indicated, and 50 μM Trimza Buffer were added to each test tube. The enzyme and inhibitor were allowed to bind for fifteen minutes in the buffer before the substrate was added. Five minutes were allotted for the enzyme to hydrolyze the substrate. Then 200 μL of 3M NaOH was added to each test tube in order to stop the reaction. Finally the absorbance of the solutions was taken at 404nm using the Shimadzu UV-2404 PC UV-Vis Recording Spectrophotometer. This assay was run twice. Exactly 50 μL of 0.011882M 3,6-di(3-indolyl)sarcosine anhydride was used to inhibit the second assay.

Table 3. This table gives a breakdown of the substrate/buffer volume per tube for the analogue assay consisting of 50 μL 0.011882M 3,6-di(3-indolyl)sarcosine anhydride.

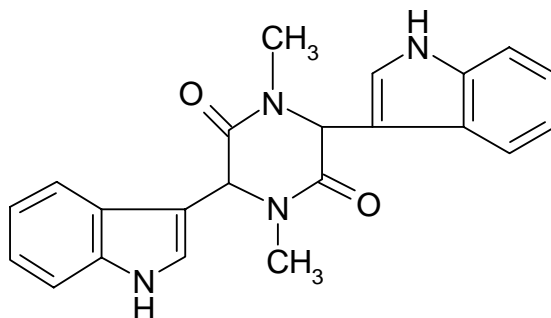
Tube	μL of pNPP	μL of buffer
1	174	1306
2	366	1114
3	558	922
4	750	730

Results and Discussion

As initial research into the study of the extraction, isolation, and behavior of dragmacidins, our laboratory decided to focus on the protein phosphatase inhibiting ability of synthesized 3,6-di(3-indolyl)sarcosine anhydride (Figure 2). Since the lab had no real dragmacidins to work with, a compound derived during the synthesis process of dragmacidins was utilized.

Figure 2.

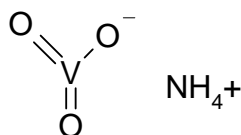
3,6-di(3-indolyl)sarcosine anhydride



Ammonium vanadate, a known inhibitor, was used in an analogue assay as guidance to help establish the basic trend progression of inhibition analogue assays. Then synthesized 3,6-di(3-indolyl)sarcosine anhydride was introduced into a series of separate analogue assays. Results for both type assays showed inhibiting ability of the ammonium vanadate and synthesized 3,6-di(3-indolyl)sarcosine anhydride compounds. Increases in the linear regression slopes as the amount of ammonium vanadate and 3,6-di(3-indolyl)sarcosine anhydride solutions increased demonstrated the inhibiting trend of the tested compounds (See Table 4,5).

Figure 3.

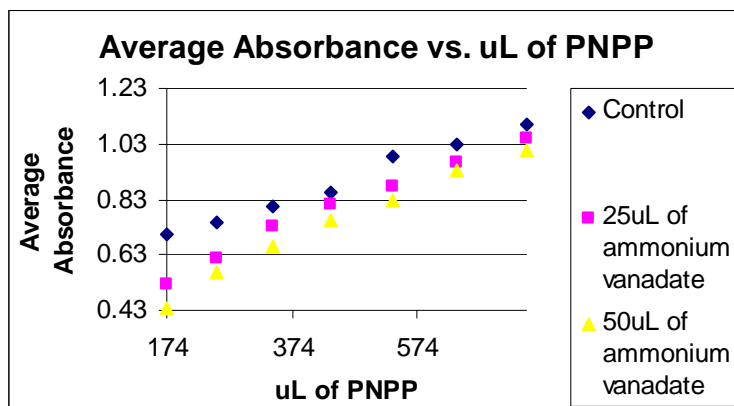
Ammonium Vanadate



Based on experimental analysis, ammonium vanadate and 3,6-di(3-indolyl)sarcosine anhydride are competitive inhibitors, meaning they bind directly into the active site of enzymes and prohibit the complete binding of substrates. The intersection of the lines on both Line-Weaver Burke plots and the y-intercepts included in the linear regression equations make this observation possible (See Graphs 1.2, 2.2).

The results of all experimentation were analyzed using the Michealis and Line-Weaver Burke plots.

Graph 1.1. This graph shows a comparison of the Michealis plots for the control and inhibitions of the ammonium vanadate analogue assay.



Graph 1.2. This graph shows a comparison of the Lineweaver-Burke plots for the control and inhibitions of the ammonium vanadate analogue assay.

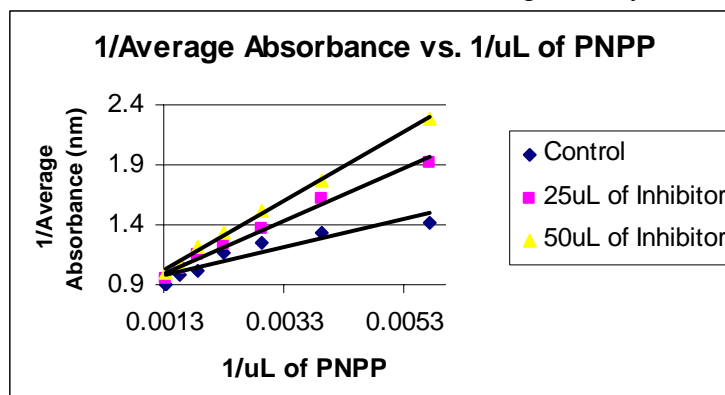
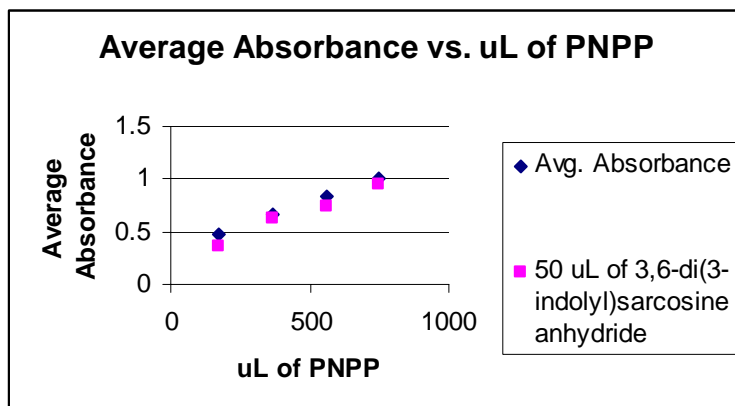


Table 4. This table is a breakdown of the slope and R² values for the Lineweaver-Burke plot to simplify the trends present. The chart is generated from the ammonium vanadate analogue assay analysis.

Analogue Assays	Slope (μL/Abs)	R ²
Control	115.7	.8767
25μL of Inhibitor	216.75	.9883
50μL of Inhibitor	288.25	.9968

Graph 2.1. This graph shows a comparison of the Michealis plots for the control and inhibitions of the 3,6-di(3-indolyl)sarcosine anhydride analogue assay.



Graph 2.2. This graph shows a comparison of the Lineweaver-Burke plots for the control and inhibitions of the 3,6-di(3-indolyl)sarcosine anhydride analogue assay.

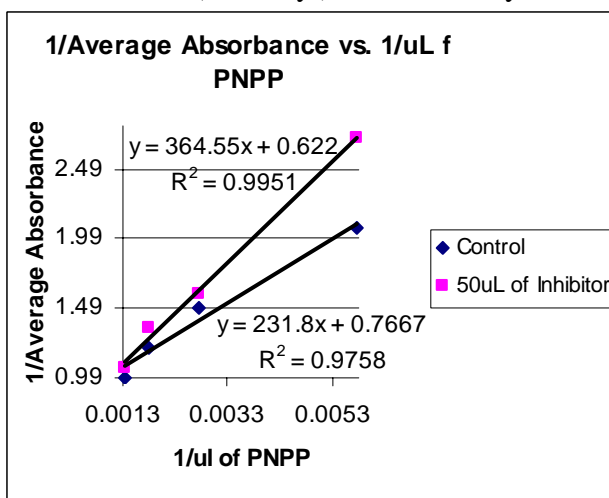


Table 5. This table is a breakdown of the slope and R² values for the Lineweaver-Burke plot to simplify the trends present. The chart is generated from the 3,6-di(3-indolyl)sarcosine anhydride analogue assay analysis.

Analogue Assays	Slope (μL/Abs)	R ²
Control	231.8	.9758
50μL of Inhibitor	364.55	.9951

In conclusion, ammonium vanadate demonstrated inhibiting ability, as was expected. Gradual increases in the slopes of the linear regression shown in *Table 5* established previously untested 3,6-di(3-indolyl)sarcosine anhydride as an inhibitor as well. Because the synthesized compound demonstrated inhibiting ability, Dr. Whitlock and her research group could very well be on their way to synthesizing a drarmacidin or other useful bis(indole) alkaloid.

Acknowledgements

Dr. Brian Koehler was of great assistance concerning structural input. Dr. Christine Whitlock and research group for provided the synthesized 3,6-di(3-indolyl)sarcosine anhydride. The author thanks Dr. Michele McGibony and the Georgia Southern University Ronald E. McNair Postbaccalaureate Achievement Program for financial support and encouragement.

References

1. Yang;Haung; Jiang. Progress in Studies of Novel Marine Bis(indole) Alkaloids. *Curr. Org. Chem.* **2004**, *8*, 1691-1720.
2. Cutignano,Adele; Bifulco, Giuseppe; Bruno, Ines; Casapullo, Agostino; Gomez-Paloma; Riccio, Raffaele. Dragmacidin F: A New Antiviral Bromoindole Alkaloid from the Mediterranean Sponge *Halicortex* sp. *Tetrahedron* **2000**, *56*, 3743-3748.
3. Capon, Robert J.; Rooney, Francis; Murray, Leanne M.; Collins, Elizabeth; Sim, Alistair T. R.; Rostas, John A. P.; Butler, Mark S.; Carroll, Anthony R.. Dragmacidins: New Protein Phosphatase Inhibitors from a Southern Australian Deep-Water Marine Sponge, *Spongosorites* sp. *J. Nat. Prod.* **1998**, *61*, 660-662.
4. Jiang, Biao; Smallheer, Joanne M.; Amaral-Ly, Carol; Wuonola, Mark A.. Total synthesis of (\pm)-Dragmacidin: A Cytotoxic Bis(indole)alkaloid of Marine Origin. *J. Org. Chem.* **1994**, *59*, 6823-6827.
5. Honkanen, R. E.; Golden, T. Regulators of Serine/Threonine Protein Phasphatases at the Dawn of the Clinical Era?. *Curr. Med. Chem.* **2002**, *9*, 2055-2075.
6. Sakoff, Jennette A.; McCluskey, Adam. Protein Phosphatase Inhibition: Structure Based design. Towards New Therapeutic Agents. *Curr. Pharm. Design* **2004**, *10*, 1139-1159.
7. Berg, Jeremy; Tymoczko, John L.; Stryer, Lubert. Enzymes: Basic Concepts and Kinetics. *Biochemistry*, *5*; Moran, Susan; Divittorio, Sonia; Santee, Mark; Hadler, Georgia Lee; Zimmerman, Patricia; Wong, Vikii; Julet, W.H. Freeman and Company: New York, 2002; 189-225.

RACE, RELIGION, AND SEX: AN ANALYSIS OF HATE CRIMES AND SOCIAL GROUPS

Ashley L. Scruggs, McNair Scholar

Dr. F. Erik Brooks, Research Mentor
Department of Political Science

Abstract

In recent years, the study of hate crimes has attained national attention from academics. Some scholars have studied and researched hate crimes in terms of victim impact, civil rights issues raised within hate laws, and the characteristics that hate crime offenders typically possess. This research branches off previous studies by examining whether certain hate crimes are more likely to be perpetrated against a particular social group. This research also examines if offenses committed are harsher when race is the motivating factor for carrying out the crime. The data used in this study was collected from the 2002 National Incident Based Reporting System and was analyzed using the Statistical Package for Social Sciences (SPSS). Specific variables in the study include sexual, assault, and homicide offenses and how each variable correlates to anti-race, anti-religion and anti-sexual hate crimes.

Key Terms: hate crimes, bias beliefs, violence

Introduction

It is estimated that between the years of 1882 to 1868 almost 5,000 cases of lynchings took place in the U.S, with four out five victims being African American. During this same time frame, the Senate had some 200 anti-lynching bills introduced to Congress that went unsigned (Levin 2002; Radelat 2005). Hate crimes are an issue that has plagued the country for centuries (Boeckmann & Turpin-Petrosino 2002). However, it was not until just recently that the United States Senate formally apologized for U.S lynchings that took place in the past. The resolution they issued “expressed the deepest sympathies and most solemn regret of the Senate to the descendants of the victims of lynchings, the ancestors of whom were deprived of life, human dignity and the constitutional protections accorded to all citizens of the United States” (Radelat 2005).

This apology and other forms of acknowledgement of the hundreds of hate crimes that have beset the United States are just a step in the right direction; but there is still a lot more that must be done. Hate crimes are still a pressing matter that must be stopped and reprimanded. However, as long as hate crimes continue to persist, avid research must be done to better understand these crimes, their offenders, and how to end such wrongful acts against society.

Assigning a specific definition to describe hate crimes internationally is difficult considering the political, social, and cultural differences that we each hold. However, according to the United States Department of Justice, hate crime is defined as “a criminal

offense committed against a person or property which is motivated, in whole or in part, by the offender's bias against a race, religion, disability, sexual orientation, or ethnicity/national origin; also known as a Bias Crime"(Nolan, Akiyama, and Berhanu 2002). Hate crimes have recently become recognized as a social problem in part due to the passage of the 1990 Hate Crime Statistics Act passed by the U.S. government. Up until that point, hate crime was an unclear term and a subject that held little data.

Review of Literature

One of the main reasons why few studies have been done on the motivations behind hate crimes is due to the difficulty of obtaining such data. The motive is often times unclear and victims, as stated in Herek, Cogan, and Gillis' study (2002) are often hesitant to report such crimes (McDevitt, Levin, and Bennett 2002). Also, because it is not mandated that agencies participate in the data collection system, hate crimes reported do not reflect a complete and accurate account of all hate crimes performed each year (Green, McFalls, and Smith 2001). Some agencies every year report zero hate crimes, but many suspect that having no hate crimes in a region is often not the case (Nolan et al. 2002). In addition, there may be hate crimes that do not fall within the eleven categories specified by the FBI and as a result are not reported as hate crimes (McPhail 2000).

It was not until hate crime laws were set in place that hate crime became recognized as a new category of criminalized behavior. The passage of the 1990 Hate Crime Statistics mandated that the attorney general establish guidelines on collecting information on hate crimes. Not long after, this task was handed over to the FBI who originated the National Hate Crime Data Collection Program to carry out the data-collection process (Nolan et al. 2002).

To understand the impact of such a law on hate crimes, we must first understand the beginnings of hate crimes themselves before there were laws to protect its victims. Although the government just recently acknowledged hate crimes as being separate and apart from other forms of crime, they in themselves are not a new concept. Committing prejudiced acts against minority groups can be traced back as far as slavery times where African Americans were exploited, beaten, and subjected to other injustices.

Lynchings seemed to run rapid in America during the late 1800's and early 1900's. Many African Americans were hanged upon trees by violent mobs who felt the victim had committed some injustice against the community. Brian Levin did an extensive review of literature tracing the history hate crime in America. In particular, Levin identified three eras that impacted hate crime in America. These eras were: the Supreme Court's resistance to status-based legislation, lynching and hate laws, and Klan violence. The era of lynching and the hate laws of Jim Crow is one era that many are familiar with. In his article, Levin reported that "of the 4,743 Americans known to have been lynched, 3,446 were black" (Levin 2002; Radelat 2005). These violent acts were overwhelming committed against minorities. The few lynching laws that were in place at this time were very rarely, if at all, ever enforced against the perpetrators.

In recent years, hate crimes have attained national concern and many studies have been done on what was before, such an ambiguous topic. Some of the issues that have been researched in detail include studies on victim impact and perspective, the civil rights

issues raised with hate laws, and the characteristics that hate crime offenders typically possess.

The impact that hate crimes have on their victims was an area that often went overlooked until recently. Herek et. al. (2002) did empirical research that addressed the victim's response to hate crimes and how it affected them psychologically thereafter. Herek's study focused on three questions: What were the different variations of hate crimes experienced by the victims, how did the victims determine that that crime was motivated by their sexual orientation, and why did the victim's choose not to report the incident to the police? The data was collected through a series of interviews and the findings reflected a consensus that the majority of hate crimes occurred in public places. Derogatory words or the location in which the crime took place (such as outside of a gay bar) were the most common responses given as to how the victim associated the crime with bias motivations. Many victims attributed their failure to report the incidents to authorities on the belief that the police would be indifferent and meager results would result from it (Herek et. al. 2002). There are countless instances where hate crimes are overlooked by the police and victims are left feeling traumatized while the offender feels a sense of invincibility and praise as result of society's lack of repercussions (McDevitt et. al. 2002; Herek et. al. 2002). This is unfortunate because the success rate of combating hate crimes rests largely on "both the victims' willingness to report offenses and on patrol officers' ability and willingness to respond to and report bias motivation when they encounter it" (Martin 1996). Overall, the victim's account in the study seemed consistent with the picture painted by the media and the findings of Messner, McHugh, & Felson (2004) and Craig (2002) in that, more often than not, the perpetrators are young men, not previously associated with the victim.

In Barnes and Ephross' (1994) study on *The Impact of Hate Violence on Victims*, findings found that more than half of the victims suffered from a series of attacks as opposed to one single attack. Feelings of anger, fear, and sadness were the emotions most often associated with the attack. Findings also revealed that approximately one-third of victims reported "behavioral responses such as moving from the neighborhood or purchasing a gun" as a result of the attack.

Understanding the role hate crime has on its victims is important. Equally important, however, is assessing the characteristics attributed to hate crime offenders and the motivations that compel them to commit such crimes. Some researchers have chosen to study hate crimes from the angle of the offender. McDevitt, Levin, and Bennett did an extensive study on the *Typology of Hate Crime Offenders* that is renowned in their field of study. With all the heated debate about hate crime offenders and the sentences necessary, there was little, if any research done on what pushed the offenders to commit such heinous acts of crime. The three scholars had completed prior research on the subject and used their previous work as the basis for this study. After reanalyzing their previous findings, four key motivations were discovered: Thrill, Defensive, Retaliatory, and Mission. It is also noteworthy to mention that most offenders studied were not found to be an extremist; rather, hate crime offenders are thought to act out based on one of the motivations identified above (McDevitt et. al. 2002).

Another study done on the characteristics of bias assaults aimed to compare bias assaults to typical crimes and highlight the differences between the two. According to the study, bias offenders were more likely to be using alcohol or drugs at the time of the

crime. The level of injury severity to victims of hate crimes is somewhat inconsistent. Messner et. al. (2004) study found that victims of bias assaults were found to suffer increased injuries compared to victims of other types of assaults. By contrast, Herek et. al. (2002) found that “bias-motivated and nonbias person crimes did not differ significantly in their general severity”; however, the psychological distress suffered by victims of bias crimes was significantly higher than that suffered by victims of nonbias crimes (Herek et. al. 2002; Craig 2002). Consistent with the findings in McDevitt’s study on the *Typology of Hate Crime Offenders*, in Messner et. al.’s study offenders were found to be more versatile than specialist. They were also found to be more often than not, carriers of the authoritarian personality (Craig 2002).

Still another aspect that some have chosen to explore is the hot topic of how freedom of speech and an individual’s civil rights relate to hate crimes, and the harsher penalties apportioned for them. The Supreme Court decided in the historic case of *Wisconsin v. Mitchell*, 113 S. Ct 2194 (1993) that an increase in sentence was constitutional and not within First Amendment protection “if the perpetrator intentionally selects the victim or targeted property because of the race, religion, color, disability, sexual orientation, national origin, or ancestry of that person or the owner or occupant of that property” (Badar 1994). Because the penalty for speech offenses was not specifically stated, there have been questions on how hate speech factors into penalty enhancement and First Amendment rights.

There have been relatively few studies that have examined the way that punishment is handed down in hate crime cases. An interesting experiment where a mock jury scenario was created found that, like in other criminal cases, “extra-legal factors such as the race of the victim, the race, social identity, and political orientation of the juror have a hand in influencing guilt and innocence decisions in racial hate crime. It was also discovered through this study that conservative minorities assigned longer sentences than conservative Caucasians” (Blake and Jean 2002).

Other research done to assess the public’s views on penalty enhancement for hate crimes found that there was “minimal public support for harsher penalties for offenders who commit hate crimes than for offenders who commit identical crimes with no specific motivation” (Steen and Cohen 2004). This line of thinking is associated with the “just deserts view in the belief that the punishment should fit the crime and on the notion of equality. Offenders who committed similar crimes should be punished and receive similar treatment by the courts” (Steen and Cohen 2004). Steen and Cohen make a logical application to the findings by comparing the public’s view on penalty enhancement to that of Affirmative Action where Americans generally agree on its practice but may question it when applied to one particular case. Similarly, although the public may generally be in support of harsher sentences for hate crimes, when isolating the particular hate offense, their outlook may change. They might say because the same offense occurred, despite bias motivation being present in one case, sentencing in both cases should mirror one another; this would only seem fair. Yet, overall, they are in support of harsher sentencing. This might explain the discrepancies in Steen and Cohen’s research. Further findings in their research reported that harsher penalties were sought for hate crimes against Jewish victims.

As of 2001, forty-five states and the District of Columbia have in place, laws punishing offenses involving discriminatory selection of crime victims, an increase from

the 28 states that had laws in place a decade earlier. New laws have arisen as of late in various states such as “cross-burning prohibitions, desecration to houses of worship, anti-masking laws, penalty enhancements and the stand-alone civil rights or intimidation statutes. All 45 states cover such categories such as race, national origin and religion, while a lesser number address gender, sexual orientation, and disability” (Levin 2001/2002).

Although awareness of hate crimes has captured public interest, limited studies have been conducted on the subject. A small amount of studies have examined the victims, offenders, and characteristics of these offenders when studying hate crimes. Some have even explored the enhanced penalty aspect of hate crimes and the constitutional rights they bring into questioning. Still others have looked for similarities and disparities of hate crime offenses compared to non-hate crime offenses. One particular area that has had little if any attention directed to it is the comparison of hate crimes to one another. Little research has been conducted to explore the relationship between specific offenses committed and their frequency as it relates to the social group targeted in the attack. The purpose of this study is to examine whether a certain hate crime is more likely to be perpetrated against a particular social group. We are particularly interested in the Sexual, Assault, and Homicide offenses and how they correlate to Anti-Race, Anti-Religion, and Anti-Sexual hate crimes. Is a particular minority group more likely to be victim to any one particular kind of offense?

This study differs from all others in several ways. The data used in the study comes from the National Incident Based Reporting System that includes data from all over the United States. It contained reports from twenty-three different states and consisted of almost 4 million different cases. Furthermore, in this study we compare similarities and disparities amongst the hate crimes themselves rather than to non-hate crime offenses. This is crucial because it allows for a more in-depth analysis of hate crimes. You must first learn and understand the nature and characteristics of hate crimes before you can begin to compare and contrast them to other traditional crimes. Lastly, this research focuses on three distinct areas in hate crime (race, religion, and sex) to bring about detailed answers rather than exploring a wide range of hate crimes. Presently, there are limited studies that have mirrored what I hope to conduct through my research. One similar in structure, Messner’s *Distinctive Characteristics of Assaults Motivated by Bias*, (2004) utilized the NIBRS as well, and compared bias assaults to non-bias assaults and looked at how other factors such as drugs and alcohol at the time of the assault impacted the offender and victim. They did not compare or look for a correlation in the hate crime and the offense committed against the victim. Nor did they limit their scope specifically within the realm of hate crimes amongst themselves.

There were two hypotheses identified in this study:

1. Victims involved in anti-black hate crimes will suffer more from assaults than victims of anti-white hate crimes.
2. Homosexual men will suffer from harsher forms of assault than victims of anti-religion or anti-race victims.

A data analysis was conducted from data collected by the National Incident Based Reporting System (NIBRS) for the year 2002. An analysis of Assault, Sexual, and Homicide offenses and the amount of times they were each committed were compared against each group of anti-race, anti-religion, and anti-sexual hate crimes.

Methods and Procedures

The most recent report from the National Incident Based Reporting System, 2002, was used to complete a data analysis. The variables of offense and bias motivation were selected for the study. The scope of offenses was then narrowed down to three categories: Assault, Homicide, and Sexual offenses. Within the three categories, three subcategories were selected that were of a violent nature to be used in the study. They were the following:

<u>Assaults</u>	<u>Homicide</u>	<u>Sexual Offenses</u>
-Aggravated Assault	-Murder/Nonnegligent	-Forcible Rape
-Simple Assault	-Negligent Manslaughter	-Forcible Sodomy
-Intimidation	-Justifiable Homicide	-Sexual Ast w/ object

The United States Department of Justice has assigned specific definitions for each offense to help eliminate discrepancies in reporting and data collection. An Assault is defined as “an unlawful attack by one person upon another” (US. Dept. of Justice 2004). Aggravated Assault, Simple Assault, and Intimidation all fall under the Assault category. An Aggravated Assault is defined as “an unlawful attack upon another person wherein the offender uses a weapon or the victim suffers severe bodily injury. Examples of bodily injury would be broken bones, loss of teeth, or loss of consciousness” (US. Dept. of Justice 2004). A Simple Assault is identified as “an unlawful physical attack by one person upon another where neither the offender displays a weapon, nor the victim suffers severe bodily injury” (US. Dept. of Justice 2004). Finally, an act of Intimidation is classified as “to unlawfully place another person in fear of bodily harm through use of threatening words or conduct but without displaying a weapon or subjecting the victim to physical attack” (US. Dept. of Justice 2004).

Homicides are defined by the United States Department of Justice as “the killing of one human being by another” (US. Dept. of Justice 2004). Under Homicide fall Murder, Negligent Murder, and Justifiable Homicide. Murder is defined as “the willful killing of another human being” (US. Dept. of Justice 2004). Negligent Manslaughter is defined as “the killing of another person through negligence” (US. Dept. of Justice 2004). Finally, Justifiable Homicide is identified as the “killing of a perpetrator of a serious criminal offense by a peace officer in the line of duty; or the killing of the perpetrator by a private individual” (US. Dept. of Justice 2004).

Lastly, Sexual Offenses are defined as “any sexual act directed against another person, forcibly and/or against that person’s will; or where the victim is incapable of giving consent” (US. Dept. of Justice 2004). Forcible Rape, Forcible Sodomy, and Assault with an object all lie under Sexual Offenses. Forcible Rape is defined as “knowledge of a person, forcibly against a person’s will or whereby the victim is unable to give consent because of mental or physical incapacities or because of youth” (US. Dept. of Justice 2004). Forcible Sodomy is identified as “oral or anal sex with another person forcibly against their will; or where the victim is unable due to mental or physical incapacities or because of youth” (US. Dept. of Justice 2004). Finally, Sexual Assault with an object is defined as the “use of an object to unlawfully penetrate the genital or anal opening of the body of another person against the person’s will or where the victim

is unable to give consent due to mental or physical incapacities or because of youth” (US Dept. of Justice 2004).

As done with the selection of offenses, the three most prevalent groups targeted in hate crimes were selected: Anti-Racial, Anti-Religious, and Anti-Sexual. Because of time restraints, every subcategory could not be analyzed within the categories. Therefore, the three most prevalent subcategories were selected to be used in the study. They were the following:

<u>Anti-Religious</u>	<u>Anti-Sexual</u>	<u>Anti-Racial</u>
-Jewish	-Male Homosexual	-White
-Protestant	-Female Homosexual	-Black
-Islamic (Muslim)	-Bisexual	-Multiracial

Then, utilizing SPSS, these variables were then cross-tabbed against one another. Each offense was cross-tabbed against each anti-hate category in turn. For example, each category under assaults was cross-tabbed against anti-racial groups, then against anti-religious groups, and then against the anti-sexual groups. An independent Chi-Square analysis was utilized to determine significance. If alpha did have a p value $\leq .05$, then variables were shown to be related. The resulting tables were used for comparison.

Results and Discussion

There were a number of limitations with the data that forced me to adjust my original design. To begin with, the category *Multiracial* in the Anti-Racial group had a very low count. It was identified as an outlier and removed from the data so as not to disrupt the findings. Secondly, when preparing to cross-tab Homicide offenses against each motivation in turn, it was discovered that no homicide cases reported any of the three hate motivations were chosen for cross-tabulation. Finally, when preparing to do the same procedure with Sexual offenses against the three hate motivations selected, only a limited amount of cases met the criteria.

Four incidents of Sexual offenses occurred in total. Two were committed against the Anti-Racial group and fell under whites. Likewise, two were committed against the Anti-Sexual group and were acted out upon lesbians. Due to the lack of cases, no significance or tests could be run. Both reported a 100 percent rate of whites and female lesbians being victimized. However, with there only being four cases, each of those concentrated in a particular category, this rate becomes invalid in context. Of all the Sexual offenses committed against Anti-Racial groups, whites were hundred percent of the time targeted. Surprisingly, there were only two incidents of Forcible Rape in total reported. Two incidents in this context do not show a correlation or a great likelihood that whites will be targeted in sexual offenses. Similarly, two cases of lesbians do not give us cause to say that in the case of Sexual offenses, lesbians will be targeted. It was necessary to explain the surrounding information behind the numbers to ensure that the numbers were not taken out of context. Because of availability, the final variables used in the analysis were the following:

Offenses:	<u>Assault</u>
	-Aggravated Assault
	-Simple Assault

-Intimidation Assault

Motivating Hate:	<u>Anti-Religion</u>	<u>Anti-Sexual</u>	<u>Anti-Racial</u>
	-Jewish	-Male (Homosexual)	-White
	-Protestant	-Female (Lesbian)	-Black
	-Islamic	-Bisexual	

Although Homicide and Sexual offenses were not available or sufficient enough in number to include in my data analysis, Assault offenses were able to be studied. Further examination showed some significant correlation and strong trends where Assaults and the motivating hates were concerned.

First, each level of Assault was examined and cross tabulated against each subcategory listed under Anti-Religion. The p value = 0.16, therefore was not a significant relationship found between the motivating hate religion and the type of Assault offense acted out. One theory as to why there was no significant relation found can be directed toward the social group of Protestants. As shown in Figure 1.1, there was an extremely low count of cases acted out against Protestants. This low number could have evened out the numbers across the board, eliminating a relationship of any kind.

Another important fact to note was the surprisingly low number of Islamic reports, especially considering that this data was collected after 9-11. The relatively low numbers bring into question the accuracy and totality of incidents reported in this data.

Figure 1.1

Assault Frequency Distribution in Anti-Religion Offenses

Cells contain: -Row percent -N of cases		V20201			
		21 Jewish	23 Protestant	24 Islamic (Moslem)	ROW TOTAL
V20061	13A: Aggravated Assault	40.0 2	.0 0	60.0 3	100.0 5
	13B: Simple Assault	22.2 2	22.2 2	55.6 5	100.0 9
	13C: Intimidation	56.8 25	4.5 2	38.6 17	100.0 44
	COL TOTAL	50.0 29	6.9 4	43.1 25	100.0 58

*Bold Font= Percent of offense that was carried out against that particular social group.

*Number below bold font = the actual # of cases there were committed against that particular social group.

Next, cross tabulation of each level of Assault against each subcategory listed under Anti-Sexual was conducted. The p value = .54. Again, no significant relation was found between the type of assault committed and the particular anti-sexual group that was victimized. However, homosexual men were found to be overwhelmingly more likely to be targeted for every form of assault reported than female lesbians or bisexuals. Because

male homosexuals were found to have the highest frequency in every level of assault, a significant relationship was not found. Nevertheless, this high frequency did show a strong trend that more times than not, when the motivating hate is sexual, homosexual men are more likely to be targeted in an assault form of offense.

This data somewhat supports the original hypothesis, that homosexual men would suffer more from harsher levels of assaults than female lesbians or bisexuals. Although they actually had a higher level of simple assaults reported as opposed to aggravated assault, it was by a margin of 1.1 differences. Furthermore, homosexual men were found to suffer from all levels of assault, not just predominately from the harsher forms as previously suspected.

Figure 1.2

Assault Frequency Distribution in Anti-Sexual Offenses

		Frequency Distribution			
		V20201			
Cells contain: -Row percent -N of cases		41 Male Homosexual (Gay)	42 Female Homosexual (Lesbian)	45 Bisexual	ROW TOTAL
V20061	13A: Aggravated Assault	75.0 18	25.0 6	.0 0	100.0 24
	13B: Simple Assault	76.1 35	21.7 10	2.2 1	100.0 46
	13C: Intimidation	63.3 19	30.0 9	6.7 2	100.0 30
	COL TOTAL	72.0 72	25.0 25	3.0 3	100.0 100

*Bold Font= Percent of offense that was carried out against that particular social group.
 *Number below bold font = the actual # of cases there were committed against that particular social group.

Finally, Assault offenses were examined and cross tabulated against each subcategory listed under the Anti-Racial category. Here the p-value was higher than .05 showing a significant relation between the type of offense performed and the motivating hate behind it, in this case, race. So, one can conclude that where race is concerned, one's social group, in this case being black directly affects the likelihood of an individual being targeted in a specific type assault offense.

Figure 1.3

Assault Frequency Distribution in Anti-Race Offenses

Frequency Distribution				
Cells contain: -Row percent -N of cases		V20201		
		11 White	12 Black	ROW TOTAL
V20061	13A: Aggravated Assault	34.0 32	66.0 62	100.0 94
	13B: Simple Assault	41.5 83	58.5 117	100.0 200
	13C: Intimidation	21.1 45	78.9 168	100.0 213
	COL TOTAL	31.6 160	68.4 347	100.0 507

*Bold Font= Percent of offense that was carried out against that particular social group.

*Number below bold font = the actual # of cases there were committed against that particular social group.

Conclusions, Recommendations, and Implications

A data analysis was conducted utilizing the NIRBS data collection for the year 2002. Motivating hates against various social groups and certain types of offenses were cross tabulated using the Independent Chi-Square to test if a correlation lied between a particular type of offense and the hate crime acted out. The study demonstrated that there was a relationship between the type of assault offense and the racial group targeted in the attack. Those results supported the hypothesis that victims in anti- black crimes would suffer more from assaults than victims of anti-white crimes.

Because research does not always go as planned, only one of the three variables originally selected was available to cross tabulate. The variables Homicide and Sexual Offenses were not able to be used in the data analysis. There were several limitations associated with this study. One of the most detrimental limitations was on the data. As noted before, hate crime reporting is not mandated and conducted on a voluntary basis. Therefore, the data collected was not a true and actual representation of all the hate crimes that occurred for the year 2002 in the United States.

For example, the data discrepancies in the lack of homicide cases associated with hate crimes as well as the low number of hate crimes reported against Islamics. With the events after the 9-11 terror attacks taken into consideration, one would surmise that the number of cases reported were extremely low.

There are a number of ways in which this study could be improved upon. I would suggest a replication of this study. Perhaps the study could be done based on date from one individual state that has had years experience in hate crime data collection. This would ideally produce more accurate and standing results. Or perhaps examine hate crimes in different regions in the United States. By comparing regions to each other, one could analyze the different attitudes in particular regions and see how they affect hate crime rates and characteristics.

In addition, all aspects of hate crimes should be analyzed. Due to time restraints I was only able to focus on three aspects of hate crimes: race, religion, and sex. Future studies should include disability and national/ethnicity hate crimes as well. There are a number of studies that need to be done concerning the subject of hate crimes. In order to ensure that such studies produce viable findings, we must implement more precise methods of data collection for hate crimes. The fact remains, as long as hate crimes continue to blemish our society, studies must be done to understand and combat such vicious acts of misdeed. This research can be applied for practical use by law enforcement agencies. It can help to provide a better understanding of hate crimes and their patterns. Such valuable information can then be used and applied to combat and prevent hate crimes.

References

- Badar, H. (1994). Penalty enhancement for bias-based crimes. *Harvard Journal of Law & Public Policy*, 17(1), 253-263. Retrieved June 4, 2005, from Academic Search Premier Database.
- Barnes, A. & Ephross P. (1994). The impact of hate violence on victims: emotional and behavioral responses to attacks. *Social Work*, 39(3), 247-251.
- Blake, P. & Jean, L. (2002). Jury decisions in hate crime cases: exploring the role of extra-legal factors. *Dissertations Abstracts International* (AAT 3065501).
- Boeckmann, R., & Turpin-Petrosino, C. (2002). Understanding the harm of hate crime. *Journal of Social Issues*, 58(2), 207-225.
- Craig, K. (2002). Examining hate-motivated aggression; a review of the social psychological literature on hate crimes as a distinct form of aggression. *Aggression and Violent Behavior*, 7, 85-101
- Green, D., McFalls L., & Smith, J. (2001). Hate crime: an emergent research agenda. *Annual Review of Sociology*, 27, 479-504.
- Hereck, G., Cogan, J., & Gillis, J. (2002). Victim experiences in hate crimes based on sexual orientation. *Journal of Social Issues*, 58(2), 319-339.
- Knight, D. (2005, June 27). Trying times. *US News and World Report*. Retrieved June 30, 2005, <http://www.usnews.com>.
- Levin, B. (2001/2002). The vindication of hate violence victims via criminal and civil adjudications. *Journal of Hate Studies*, 1(1), 133-165.
- Levin, B. (2002). From slavery to hate crime laws: the emergence of race and status-based protection in american criminal law. *Journal of Social Issues*,

- 58(2), 227-245.
- Martin, S. (1996). Investigating hate crimes: case characteristics and law enforcement responses. *Justice Quarterly*, 13, 455-480.
- Messner, S., McHugh, S., & Felson, R. (2004). Distinctive characteristics of assaults motivated by bias beliefs. *Criminology*, 42(3), 585-590. Retrieved May 17, 2005, from Academic Search Premier Database.
- McDevitt, J., Levin, J., & Bennett S. (2002). Hate crime offenders: an expanded typology. *Journal of Social Issues*, 58(2), 303-317.
- McPhail, B. (2000). Hating hate: policy implications of hate crime legislation. *Social Service Review*, 74(4), 635-653.
- Nolan, J., Akiyama, Y., & Berhanu, S. (2002). The hate crime statistics act of 1990. *American Behavioral Scientist*, 46(1), 136-153.
- Radelat, A. (2005, June 14). Senate apologizes for U.S. lynchings. *Montgomery Advertiser*. Retrieved June 14, 2005, <http://www.montgomeryadvertiser.com>.
- Steen, S., & Cohen, M. (2004). Assessing the public's demand for hate crime penalties. *Justice Quarterly*, 21(1), 91-124.
- U.S. Dept. of Justice, Federal Bureau of Investigation. NATIONAL INCIDENT-BASED REPORTING SYSTEM, 2002 [Computer file]. Compiled by the U.S. Dept. of Justice, Federal Bureau of Investigation. ICPSR ed. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [producer and Distributor], 2004.

THE RELATIONSHIP BETWEEN BODY MASS AND SELF ESTEEM

Marsha Thomas, McNair Scholar

Dr. A. Barry Joyner, Research Mentor
Jiann-Ping Hsu School of Public Health

Abstract

Obesity is a growing health problem in the United States, and affects both physical and psychological functioning. In adolescents, research has consistently shown a relationship between obesity and self-esteem. However, this relationship is not as strong or consistent in adults. There has been little research found examining this relationship in college age students. Therefore, the purpose of this study is to examine the relationship between body mass and self-esteem among college students. It is hypothesized that as body mass increases, self-esteem will decrease. It is also hypothesized the relationship will be stronger for females than for males. The participants (N=104) will be college students at Georgia Southern University. They will be conveniently sampled from different locations on campus including the library, the student center and various computer labs. During data collection, subjects will be asked to complete a survey, which includes both demographic information and the Rosenberg Self Esteem Scale (RSES). The demographic information will include gender, race and age. Participants will self-report height and weight from which the Body Mass Index (BMI) will be calculated. Once the data have been collected, the correlation between BMI and RSES will be examined using SPSS 12.0 for Windows. Analyses by gender and race will also be performed.

Introduction

The number of individuals who are either overweight or obese has reached an all time high (Huang, T. T.K. et. al 2003). Approximately two thirds of the adult population is overweight and close to one fifth of this demographic is obese (Huang, T. T.K. et. al 2003). Not only is this epidemic having a dire effect on the adult population, but it is also affecting children as well. Childhood obesity has increased by more than fifty percent over the past three decades (O'Dea, J. 2004) with one fourth of adolescents being overweight (Holmes, B.1998). As the average body mass index (BMI) is becoming higher in the United States, children have a fifty percent chance of being overweight or obese at some point in their lives (Holmes, B. 1998).

Obesity not only has adverse effects physically, but also mentally. Along with the heart disease, diabetes, and other physical ailments, obesity can lead to low self-esteem, depression, lack of motivation, and low quality of life (Sheslow, D. Hassink S., & Wallace, W. 2004). There have been numerous studies conducted on the effects of obesity on psychosocial well being (Swallen, K. C. et al 2005; Hill, AJ and Williams, J. 1998; Renman, C. et al, 1999).

With these studies there have been some inconsistencies in the relationship between the two variables among the adult age group. In a study conducted on adult

Thomas: Relationship between Body Mass and Self Esteem

females, it was revealed that women with a higher body mass index did not have poorer mental health than their smaller counterparts (Hill, A.J.;1998). However, research conducted to study body fat distribution and self-esteem in male and female adults, shows that low body satisfaction and self-esteem scores correlate with lower body size and shape in women and upper body shape and size in males. This result shows that unhealthy psychological well being can be associated with natural body patterns for both genders (Hoffman, J. & Brownell, K.1997).

However, studies done on adolescents have been more consistent showing BMI does affect self-esteem. Children who were studied to have low self-esteem were most likely to be overweight or obese (Hesketh, K. Wake, M. Waters, E. 2004). Other findings also show kids whose BMI is 30 or higher are not satisfied with their body or their physical abilities (Renman, C. Engstrom, I. Silfverdal, S.A., Aman, J. 1999.). Conversely additional research found that BMI was not a significant predictor of self-esteem in Korean adolescent females (Kim, O. & Kim, K. 2001).

Only a few studies have been conducted on the relationship between BMI and self-esteem among college students. Because there are inconsistencies among the age groups of adolescents and adults, research should be conducted on the age group of young adults, which include college students. Since it has been shown that the correlation between self-esteem and BMI is the strongest during late adolescence but weakens during late adulthood, identifying when the relationship changes is necessary. This is important in helping improve quality of life among adults because obesity is expected to have the highest increase in the young adult age group ages 18 – 29 (Goodman, E. &Whitaker, R.C. 2002; Racette, S.B. et al. May/June 2005).

The purpose of this study is to determine the relationship between BMI and self-esteem in college age participants. It is hypothesized that as BMI increases self-esteem decreases. During this study, the following research questions will be addressed as well. Is there a difference in self-esteem between males and females? Does race have an effect on the relationship between self-esteem and body mass index?

Methods

Participants

A convenience sample of 104 students at Georgia Southern University was collected. Students were sampled from different locations on campus including the library, the student center and various computer labs. Participants who consented to participate were administered a survey which included both the Rosenberg Self-Esteem Scale and demographics including age, gender, race, weight, and height. The use of human subjects in this research was approved by the Institutional Review Board of Georgia Southern University.

Measures

BMI

Self reported height in feet and inches and weight in pounds were used to determine the (BMI). Height was converted to meters (m) and weight was converted to kilograms (kg) to determine BMI. BMI is calculated as kg/m^2 . According to the CDC, a BMI of 30 or greater is considered obese (CDC 2004). Based on BMI, subjects were categorized as obese or non-obese. Participants whose BMI was less than 30 were non-obese and those with BMI of 30 or higher were obese.

Self-Esteem

Self-esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg, M. 1965). This scale includes 10 questions, five, which are positively worded, and five, which are negatively worded. Responses are based on a four point Likert format. Each question was scored by strongly agree = 1, agree = 2, disagree = 3, and strongly disagree = 4. The higher the score for the Rosenberg Self-Esteem Scale, the higher an individual's self esteem.

Sociodemographics

Demographic variables include gender, race, and age. Three ethnic groups were examined: black, white, and other (this includes Hispanic, Asian, multi-racial, and Indian).

Data Analysis

Descriptive statistics were used to describe the participants of the study. Pearson correlation was used to determine the relationship between BMI and self esteem. An independent t-test was used to determine the differences between obese and non-obese groups for self-esteem. For all analyses, an alpha level at .05 was used. SPSS 12.0 for Windows was used to analyze the survey data.

Results

Of the 104 participants in this study, there were 62.5% (n=65) females and 37.5 % (n = 39) males; 55.6 % (n = 58) were black, 35.6% (n = 37) were white and 8.7 % (n = 9) were a different ethnicity (Hispanic, Indian, Asian and Multiracial). The average age was 21.26 (SD = 2.39). The mean height was 66.83 inches (SD = 4.49) and the average weight was 160.14 pounds (SD = 34.12). The mean for BMI was 25.22 (SD= 5.0). Of the 104 participants, only 99 completed the survey completely. The participants categorized in the obese group (n=14) consisted of 53.8 % (n=7) black females, 23.1% (n=3) white females, 15.4 % (n=2) black males, and 7.7% (n=1) white males. The non-obese group (n=85) included 46.2% (n=26) black females, 76.9 % (n= 19) white females, 84.6% (n=20) black males, and 92.3 % (n=14) white males.

The Pearson correlation between BMI and self-esteem shows an inverse relationship of $-.147$ ($p > .05$). This correlation indicates there is no relationship between the two variables. The correlation for gender (male $-.126$ and female $-.156$,) as well as race (white $-.243$, black $-.138$, and other $-.329$) shows no significant relationship because the p-value is greater than .05.

An independent t-test was used to examine the difference between obese and non-obese participants for self-esteem. Of the 104 participants, 99 completed the survey to its entirety; 85 were in the non-obese group and 14 were obese. The independent t-test shows the mean self-esteem score to be 23.89 (SD = 5.52) for the non-obese group, while the mean for the obese group is 21.00 (SD = 6.53). The results of the independent t-test show no significant difference between the groups ($p > .05$). However, there appears to be a trend that the non-obese participants' self-esteem tends to be higher.

Discussion

One purpose of this study is to examine if BMI affects self-esteem. The hypothesis was not supported because there was no significant relationship between self-esteem and BMI. There were some participants whose self-esteem was higher in the obese group than the non-obese group. This relationship was similar for both males and females and all ethnic groups. Contrary to the results of this study, research has shown

Thomas: Relationship between Body Mass and Self Esteem

that college aged Caucasian females have lower self-esteem compared to any other ethnic group (Russell, W.; Cox, R.H. 2003.).

As discovered in this research, there were some individuals who were considered obese. This was mostly prevalent among black females. Although black females tend to be heavier, previous research displays that regardless of body composition, they are not vulnerable to lower self-perception or self-esteem because they have not adopted society's standards as Caucasian females and other ethnicities have (Russell, W.; Cox, R. H. 2003.).

The results of this research study may be due to some limitations. One limitation was the survey required self reported height and weight. Although research has shown self reported height and weight is reliable to calculate BMI (Goodman, E.; Hindin, B. R.; Khnadewel, S. July 2000), inconsistencies still may occur. This survey was given with the assumption that all information answered was done so truthfully. The second limitation was the lack of variability in BMI. A third limitation was that the sample was not randomly selected. Therefore, the sample was not representative of the Georgia Southern population. There were only 14 individuals who were considered obese according the standards of the CDC. If there were more participants who would fall into the obese category, a significant difference may have been found. The independent samples test table shows a significance of .080. This means that the p-value was very close to .05 and shows a trend. Therefore, more variability in the BMI may have produced different results. The last limitation was the Hawthorne effect. Because this was a survey, many of the participants may have answered the questions according to what they thought may be the correct answer.

There are some implications to follow for future studies. Firstly more research needs to be conducted to further assess the self-esteem among college students. Surveys that include physical and social perception should be administered in addition to the global self-esteem survey. Also for accuracy, weight and height should be collected by the investigator to calculate the body mass index. Along with collecting BMI, also measure for body composition. Because BMI does not account for fat and muscle mass, this alone may not be the most accurate predictor for obesity. The last implication is a larger sample size must be used to assure that the sample is representative of the population.

In summary, self-esteem and body mass among college students showed no relationship. Also neither race nor gender had any effect on self-esteem. Although there was a trend of higher self esteem among non-obese young adults, individuals categorized as obese also scored high on self-esteem. Therefore, there was no significance in the relationship between body mass and self-esteem.

In conclusion, obesity is a serious issue in our nation. This epidemic is especially prevalent among young adults. Because obesity is expected to increase among adults ages 18- 29 (Goodman, E. &Whitaker, R.C. 2002; Racette, S.B. et al. May/June 2005), it is important to assess the quality of life among this age group. This can be done through more research that includes self-esteem, physical perception and social perception analyses. Once it is understood how young adults view their health and quality of life, promotion of healthier lifestyles can be made.

References

- Huang, T. T.K., PhD, MPH; Harris, K. J. PhD, MPH; Lee, R. E. PhD;
Nazir, N. MBBS, MPH; Born, W., PhD; Harsohena Kaur, MD, MPH.
Assessing Overweight, Obesity, Diet, and Physical Activity in College Students.
Journal of American College Health. Sept. 2003.Vol. 52. No. 2.
- O’Dea, J. Evidence fro a Self Esteem Approach in the Prevention of Body Image and Eating Problems among Children and Adolescents. *Eating Disorders.*2004.
Vol. 12. 225 – 239.
- Holmes, B. Childhood Obesity and Adolescent Obesity in America: What’s a Parent to Do? .1998
- Sheslow D, Hassink S, and Wallace W. The Relationship between Self-Esteem and Depression in Obese Children. *Department of Pediatrics.*
- Swallen, K. C., Reither, E. N., Haas, S. A., Meir, A. M. Overweight, Obesity, and Health-Related Quality of Life Among Adolescents: The National Longitudinal Study of Adolescent Health. *Pediatrics.* Feb 2005, Vol. 115.
- Hill, AJ; Williams, J. Psychological Health in a Non-Clinical Sample of Obese Women. *International Journal of Obesity.* Feb1998. p 578 -583. 5p.
- Hoffman, J. Brownell, K. Sex Differences in the Relationship of Body fat Distribution with Psychosocial Variables. *International Journal of Eating Disorders.*1997 Vol. 22. p 139 -145.
- Hesketh, K. Wake, M. Waters, E. Body Mass Index and Parent- Reported Self-esteem in Elementary School Children: Evidence for a Causal Relationship. *International Journal of Obesity.* Aug. 2004. Vol. 28. 1233 – 1237.
- Renman, C. Engstrom, I. Silfverdal, S.A., Aman, J. Mental Health and Psychosocial

Thomas: Relationship between Body Mass and Self Esteem

- Characteristics in Adolescent Obesity; a Population-based Case Control Study.
Acta Paediatrica. 1999. Vol. 88.
- Kim, O. & Kim, K. Body Weight, Self Esteem, and Depression in Korean Female Adolescents. *Adolescence*. Summer 2001. Vol. 36, No. 142.
- Goodman, E. MD; Whitaker, R.C MD, MPH. A Prospective Study of the Role of Depression in the Development and Persistence of Adolescent Obesity.
Pediatrics. Sept. 2002. Vol. 109, No. 3.
- Racette, S.B., PhD; Deusinger, S.S, PT, PhD; Struber, M. J, PhD; Highstein, G.R., RN, PhD; Deusinger, R.H, PT, PhD. Weight Changes, Exercise, Dietary Patterns During Freshman and Sophomore Years of College. *Journal of American College Health*. May/June 2005. Vol. 53, No 6.
- Rosenberg, M. Society and the Adolescent Self Image. Princeton, NJ: Princeton University Press.1965
- Russell, W.; Cox, R.H. Social Physique Anxiety, Body Dissatisfaction, and Self-Esteem in College Females of Differing Exercise Frequency, Perceived Weight Discrepancy and Race. *Journal of Sport Behavior*. 2003. Vol. 26, No. 3.
- Goodman, E.; Hinden, B R. Khnadewel, S. Accuracy of Teen and Parental Reports of Obesity and Body Mass Index. *Pediatrics*. July 2000. Vol. 106 Issue 1, p52, 7p.

THE RELATIONSHIP BETWEEN BODY MASS AND FAST FOOD CONSUMPTION

Kelsey Thornton, McNair Scholar

Dr. A. Barry Joyner, Mentor
Jiann-Ping Hsu School of Public Health

Abstract

Weight gain occurs when there is an energy imbalance – people consume more calories than they expend. High calorie and high fat fast foods may be partially responsible for the rise in obesity rates in the United States. College students may be more likely to consume fast food because of the price, availability, and convenience. Therefore, the purpose of this study is to determine the relationship between body mass index (BMI) and fast food consumption (FFC) in college students. It is hypothesized that students eating more fast food will have higher BMI. Participants (N=105) will be Georgia Southern University students. They will be conveniently selected from residence halls, classrooms, the library, and student union. Participants will complete a survey which includes demographic information and questions about FFC, living arrangement (on or off campus), physical activity, and fruit and vegetable consumption. To determine BMI, participants will self report height and weight. Data will be analyzed using SPSS 12.0 for Windows. Analyses will examine the relationship between BMI and FFC. Also, analyses will be performed by gender, race, living arrangement, physical activity and fruit and vegetable consumption.

Introduction

Obesity has reached epidemic proportions in the United States and is threatening to become a global epidemic (Schlosser, 2001). The Surgeon General of the United States has estimated the total cost of overweight and obesity in the United States in 2000 at nearly 10% of U.S. health care expenditures (U.S. Department of Health and Human Services, 2001). This is more than twelve times the yearly cost of HIV/AIDS prevention and care in Africa, Asia, and Latin America. Overweight and obesity are widespread and growing problems globally (Caballero & Popkin, 2002). Currently, over 107 million U.S. adults are overweight (Flegal, Kuchzmarski, & Johnson, 1998). This alarming increase is also present among the nation's youth; 25% of U.S. children are overweight and obese. If these trends persist, the entire U.S. adult population could be overweight within a few generations (Trioano & Flegal, 1998).

An individual's body weight and body composition are determined by interactions between the environment and genetics (Hill, Pagliassotti, & Peter, 1994). The environment's contribution to obesity must be thought of in terms of how it increases the risk for positive energy balance (French, Story, & Jeffery, 2001). It is an accepted fact that the changes in eating and exercise behaviors that are driving the obesity epidemic are largely due to an environment that encourages lower activity levels and higher energy intake (Hill & Peters, 1998). Research has shown that one potentially important dietary factor of obesity is the consumption of fast

Thornton: Body Mass and Fast Food Consumption

food, which can be defined as convenience food purchased in self service or carry out eating places (U.S Department of Agriculture, 1997).

In examining the populations affected by obesity, it becomes evident that there is a missing link in research that has studied the affects of environmental factors such as Fast Food Consumption (FFC) and its relationship to the college student population. Among the College and University population, approximately 57% (7.1million) are from 18-24 years of age (Centers for Disease Control, 1997). These transition years provide an opportunity for the establishment of healthful lifestyles and behaviors (Dinger & Wargandt, 1992). However, data from the 1995 College of Health Risk Behavior Survey indicate that many college students engage in lifestyles behaviors that place them at risk for developing serious health problems (Centers for Disease Control, 1997).

In one study among college students, researchers found that the students consumed higher than recommended quantities of fat, ate inadequate amounts of fruits and vegetables, and reported poor exercise habits (Brevard & Ricketts, 1996). In another study assessing weight status, dietary practices and diet patterns among a sample of college students in the context of Healthy People 2010 objectives, it was found that a large percentage of students consumed fast foods (DeBate, Topping, & Sargent RG, 2001). In many fast food outlets, it is close to impossible to select a combination of items that yield even a moderate energy density (energy density is highly correlated with fat density). Under these constraints, the amount of food a person eats would need to be strictly limited in order not to greatly exceed their energy and fat requirements (Prentice & Jeb, 2003).

The 1995 National College Health Risks Behavior Survey found that 74 % of college students did not eat five or more servings of fruits and vegetables per day. Fruit and vegetable consumption may affect energy intake and body weight because these foods are high in water and fiber and low in energy density (Tohill BC, Seymour J, Serdula M, Kettel-Khan, Rolls B, 2004). Lin and Morrison reported that higher body weight was associated with lower fruit and vegetable consumption among women and men (Lin& Morrison, 2002) Reported behaviors of college students also indicated that they had poor exercise habits (Brevard et al., 1996). Other behaviors that may put college students at risk have in some cases been associated with living arrangement. Few studies, however, have compared lifestyle habits of college students living on campus with those living off campus. Although controversy exists in the literature about whether residency influences dietary intake (Jakobvits C, Halstead P, Kelly R, Roe DA, Young CM, 1997), there has been research to show that it is possible that residence has a great influence on many lifestyle factors. In a study examining if residency of college students affect dietary intake, physical activity level, and serum lipid levels, one of the findings of this study was that body mass index of both men and women, living on and off campus were within a healthy range. The study also found that students living on campus have access to many fried and fast foods. In contrast, students living off campus may have less money to spend for food, therefore, they many not eat fried and fast foods (Melby Cl, Femea PL, Scia JP, 1986), and may choose leaner protein sources (Brevard &Ricketts 1996). These contradictory findings may be associated with the amount of physical activity. Students living on campus may exercise more than those living off campus because of exercise facilities and classes offered on campus are more convenient. This allows for students who exercise more to consume higher energy sources and higher fat intake such as fast foods, without increasing body mass index (BMI).

Therefore, the purpose of this study is to identify if lifestyles behaviors such as fast food consumption (FFC) are related to Body Mass Index in Georgia Southern University students. In

this study, I will explore how FFC, Fruit and vegetable intake, physical activity, and living arrangement relate to BMI. In doing this research, I hypothesized that there will be a positive correlation between FFC and BMI.

Methods and Materials

Participants

This study collected data from Georgia Southern University students (N = 105) between the age of 18-25. These students were conveniently selected as volunteers from the student union, library, and residence halls. Participants were asked to self-report height and weight. Participants were asked a series of question about demographics, living arrangements, and were asked to recall information about fast food consumption and location, physical activity, and fruit and vegetable intake within the past 7 days.

Procedures

Questions from the physical activity and fruit and vegetable consumption section of the Behavioral Risks Factors Surveillance Survey were used for the study (BRFSS, 2003).

Questions about demographics and fast food were also included. Each participant was asked to read an informed consent. After reading the informed consent, the participants were further instructed that filling out the survey would imply that they agreed to the terms of the informed consent. After each survey was complete, the surveys were then given an identification number. All data remained anonymous and individual responses were not linked to the participants.

Instrumentation

BMI was calculated from self-reported height and weight. BMI is calculated as: weight (kg) / height (m)². Obese groups were made using the Center for Disease Control classifications (BMI > 30 non-obese, BMI ≤ 30 obese).

Data Analysis

Descriptive statistics were used to describe the sample. Pearson correlations were used to determine the relationship between BMI and fast food variables. Independent t-tests were used to determine differences between obese and non-obese for fast food variables. Cross tabulations were used to examine relative frequencies across variables. An alpha level of .05 was used for all analyses. SPSS 12.0 for Windows was used to analyze data.

Results

Of the 105 participants, 49.5% (n = 32) were female, 46.7% (n = 49) were males. There was a total of 34.3% (n = 36) White participants, 57.1% (n = 60) Black participants, 1 Asian participant and 2.9% (n = 3) who identified themselves as other. The mean height of participants was 67.75 (SD = 4.40) inches, with a mean weight of 168.07 lbs (SD= 42.2). The mean BMI of the participants was 25.67 (SD = 5.71). Data from five participants were missing from the race and living arrangement questions, and data from four participants were missing from the age and gender questions.

The Pearson correlation revealed no relationship between BMI and the number of times participants ate fast foods within the past week ($r = -.049, p > .05$). It also revealed that there was no relationship between BMI and number of fast food restaurants within a mile of each participant ($r = -.065, p > .05$). Independent t-test showed no significant differences between obese groups for any of the fast food variables ($p > .05$).

Obese groups and living arrangements cross-tabulations were made using the living arrangement categories which consisted of: a) residence halls, b) on campus apartment, c) off campus apartment, d) with parents. From the data reported, students who were non-obese

Thornton: Body Mass and Fast Food Consumption

(69.1%) tend to live off campus in an apartment more than do the obese group (52.9%) participants. (See Table 1.1)

Obese groups (obese, non-obese) and physical activity cross-tabulations were made using the answer categories which included yes, no, don't know. From this statistical data there were no trends between BMI and physical activity. (See Table 1.2)

Obese groups (obese, non-obese) and green salad cross-tabulations were made using the answer categories which included a) did not, b) 1-3 times per week, c) 4-6 per week, d) 1 time per day, and e) 2 times per day within the past seven days. Significant differences were observed; the obese groups (81.3%) reported they had eaten salad 1-3 times per week, while on the other hand, non-obese groups (34.6%) reported they had not eaten green salad at all within the past week. (See Table 1.3)

Obese groups and potatoes cross-tabulations were made using categories about how often participants had eaten potatoes within the past week. (See Table 1.4) Obese and other vegetable groups (excluding potatoes) were cross-tabulated using the same format as the prior questions as answer categories. (See Table 1.5) Obese groups and carrots were cross-tabulated. The statistical data showed that there were no trends between these two variables. Obese groups and fruit were cross-tabulated to see if there was a relationship between BMI and Fruit intake. There were no trends between BMI and Fruit intake.

Discussion

From the data recorded, there seems to be no relationship between BMI and FFC or the number fast food restaurants that are within a mile of the participant. The living arrangement shows that more obese than non-obese people live off-campus in an apartment. Fruit and vegetable consumption showed to have no relationship between BMI and physical activity.

This study used self-report of height and weight to determine BMI. Using BMI in order to classify as overweight or obese is a commonly used practice in survey research because it is easy to administer, and relatively time and cost efficient (Stofan JR, DiPetro L, Davis D, et al., 1998). Although researchers find that the self-report method is convenient, self-report of height and weight are never precisely accurate. Individuals are prone to overestimate their height, and underestimate their weight (Spencer EA, Appleby PN, et al, 2002). These miscalculations could result in up to 22% BMI misclassification among men and women (Flood V, Webb K, Lazurus R, et al, 2000). Self-report will also misclassify individuals with muscular body composition as being overweight or obese (Sharp et al, 2004).

This study consisted of only 105 Georgia Southern University students. This amount is not a true representation of the university's population. It is estimated that approximately 16,000 students attend Georgia Southern University. Since this study was conducted during the summer months of the school year, less than half of the student population that would usually be on campus in a normal day were dramatically decreased. Because there were only limited places on campus that were occupied with largely diverse groups of people, areas such as the student union, library, and residence halls were used to target participants. Participants in this study were non random and as a result there was not an even distribution among the different races. (White = 36, Black = 60, Asian = 1, Other = 3).

One of the factors that could have affected the correlation between BMI and FFC is the lack of variability in BMI. Because the majority of the participants were not obese, this factor may have restricted the correlation. This data read is significant in answering whether or not FFC and BMI are related. If more diverse BMI groups had been gathered, the correlations probably would have been stronger between BMI and fast food variables.

The survey used for this research required that the participants recall information. In most cases, individuals were more likely to guess at the number of occurrences a particular event happened without actually re-examining their food habits and physical activity habits for the past seven days. The survey also required the participant to tell how many fast food restaurants were within a mile of where they lived. Since this question was basically an estimate on the part of the participant, it is possible that they could have miscalculated the number of fast food restaurants within a mile from them. This question seemed to be difficult for many participants who were new to the area because they were just here for summer school and didn't really know the town well enough to give a good estimate. The participants' perception of a mile was different, which could have affected the outcomes of the fast food variables and BMI correlations.

The questions used to assess the participants' consumption of fast foods were subjective. The data could have been affected by places such as Subway or including a healthy menu item that they purchased as a time in which they ate fast foods. Many fast food restaurants have made concerted efforts to put healthier menu items on their menu. As a result, some of the participants' responses to the fast food question are not valid.

Dietary patterns have been analyzed in several studies. Higher BMI levels were shown to be associated with diets high in fats and refined carbohydrates, and BMIs with diets that consisted of whole grains, dairy, fruit and vegetables (McCrary, Fuss, MoCollum, & et al., 1999), (Sichieri, 2002). Findings in this study reveal that green salad intake was higher in obese groups than in non-obese groups. Within the past seven days, 36% (n =28) of the non-obese groups did not consume green salad, while participants in the obese groups 12.5% (n = 2), did not consume green salad. Overall, more individuals in the obese groups ate more salad within a week than did non-obese participants. However, this data may be affected by the fact that most food frequency questionnaires do not collect detailed information on the preparation of fruits and vegetables consumed (Tohill, et al., 2004). The method of preparation for fruits and vegetables influences its calorie content. As with salad preparation, the salad itself may initially be low in calories, but with the addition of salad dressing and other high fat toppings, added fats can severely reduce the nutritional quality of the food.

FFC and BMI in this study were shown to have no relationship. However, in other studies FFC has been associated with higher BMIs. In a study examining fast food, weight gain, and insulin resistance, data reveals that fast food frequency was associated with a rise in body weight. (Pereira , Kartashov , Ebbeling , Horn, Slattery, & et al., 2005). In a study assessing the effects of fast food consumption on energy intake and diet quality, fast food consumers ate more total fat and had higher BMIs (Bowman , Gortmaker , Ebbeling, & et al).

More participants in the non-obese group reported living in an off-campus apartment. This finding is consistent with those of Melby et al (1986)., and Brevard et al (1996) who reported that students who live on campus had increased accessibility to fast and fried foods, and due to lack of money, college students who lived off-campus would choose leaner proteins to eat instead, decreasing the BMI of students whose living arrangement was off-campus.

Conclusion

Future research in this area should obtain larger samples, which may help reduce the lack of variability found within the obese groups. In order to wholly understand if FFC in college students is related to BMI, future research must clearly identify the food types purchased at fast food restaurants. Although most survey instruments on dietary intake do not have details as far

Thornton: Body Mass and Fast Food Consumption

as preparation of the food item is concerned, it is an issue that can greatly affect the outcomes data and should be considered.

Obesity is affecting every age group at rates higher than ever before. At some point, it becomes important to put an end to an epidemic that currently takes the lives of more people than smoking. Obesity is a disease which can be both avoided and controlled. Identifying the factors that promote obesity because of its high fat content such as fast food will ultimately make individuals aware of the dangers associated with their eating habits and FFC. The college age population is among the largest percentage of people who if educated on the Affects of FFC on there BMI could potentially make substantial life changes in their dietary habits. Although there was no relationship between BMI and fast food consumption found in this study, there are numerous studies that have identified fast food as a trend that is conducive to increased and obese BMIs.

References

Behavioral Risks Factors Surveillance System. Atlanta, Ga.: Centers for Disease Control, Public Health Service, U.S. Department of Health and Human Services; 1993

Brevard PB & Ricketts CD (1996). Residence of college students affects dietary intake, physical activity, and serum lipid levels. *Journ. Am. Diet. Assoc.*

Caballero B, Popkin BM. The Nutrition Transition: Diet and disease in the developing world. *London : Academic Press; 2002 1-7*

Centers for Disease Control and Prevention. Surveillance Summaries. June 28, 1997. *MMWR*, 1997: 51

Flegal KM, Kuczmarski RJ, Johnson CL. 1998. Overweight and Obesity in the U.S.: prevalence and trends, 1960-1994. *Int. J. Obes.* 22:39-47

Flood V, Webb K, Lazurus R. et al. Use of self report to monitor overweight and obesity in populations: some issues for consideration. *Aust NZJ of Public Health; 200; 24(2): 96-99*

French SA, Story M, Jeffrey RW. Environmental Influences on Eating and Physical Activity. *Annu. Rev. Public Health* 2001. 27: 309-35

Hill JO, Pagliasotti MJ, Peters JC. Genetic Determinants of Obesity. *C Bouchard Ed.* (CRC Pres, Boca Roton Fl. 1994) pp. 35-48

Hill JO, Peters JC, 1998. Environmental contributions to the obesity epidemic. *Science* 280:1371-74

Jakabvits C, Halstead P, Kelly R, Roe DA, Young CM. Eating Habits and Nutrient intakes of College Women Over a Thirty-year Period. *J. Am. Diet. Assoc.* 1977; 71:405-411

Lin BH, Morrison RM. Higher fruit consumption linked with lower body mass index. *Food Rev.* 2002;25:28-32

Thornton: Body Mass and Fast Food Consumption

Melby CL, Femea PL, Sciacca JP. Reported Dietary and Exercise Behaviors, Beliefs, and Knowledge among University Undergraduates. *Nutr. Res.* 1986;8:799-808

Prentice AM., Jebb SA. Fast food energy density and obesity: a possible mechanistic link. *Obesity Rev.* 2003; 4; 187-94

Schlosser E. *Fast Food Nation*. Houghton Mufflin:Boston, 2001

Schwarthlander B., Souer J., Walker N., et al. Resource needs for HIV and AIDS. *Science* 2001; 292:2434-2436

Serdula MK, Byers T, Mokdad AH Simoes E, Mendlem JM, Coates RJ. Evaluation of a brief telephone questionnaire to estimate fruit and vegetable consumption in diverse study populations. *Epidemiology.* 1993m 142:455-463

Spencer EA. Spencer EA, Appleby PN, et al. Validity of self-reported height and weight in 4808 PIC-Oxford participants. *Public Health and Nutrition.* 2002;594) 561-565

Troiano KP, and Flegal KM, *Pediatrics* 101, 497 (1998)

United States Department of Agriculture's Centers for Nutrition Policy and Promotion. 1996. *The Food Guide Pyramid*

U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*. Roadville, MD,:U.S. (Department of Health and Human Services, 2000

World Health Organization. *Obesity: Preventing and Managing the Global Epidemic* (World Health Organization, Geneva, 1998)

Cross Tabulations

	Residence Hall	On Campus Apartment	Off Campus Apartment	Parents
Non-Obese (n =81)	10	11	56	4
Obese (n = 17)	2	5	9	1

Table 1.1 Obese Groups and Living Arrangement

	Yes	No	Don't Know
Non-Obese (n = 82)	60	22	0
Obese (n =17)	12	4	1

Table 1.2 Obese Groups and Physical Activity

Thornton: Body Mass and Fast Food Consumption

	Did Not	1-3 Per Week	4-6 Per Week	1 Per Day	2 Per Day
Non-Obese (n = 81)	28	43	4	3	3
Obese (n = 16)	2	13	1	0	0

Table 1.3 Obese Groups and Green Salad Consumption

	Did Not	1-3 Per Week	4-6 Per Week	1 Per Day	2 Per day	3 Per Day
Non-Obese (n = 81)	34	36	5	3	2	1
Obese (n = 16)	9	6	1	0	0	0

Table 1.4 Obese Groups and Potato Consumption

	Did Not	1-3 Per Week	4-6 Per Week	1 Per Day	2 Per Day	3 Per Day	4 Per day
Non-Obese (n = 81)	13	25	21	11	7	2	2
Obese (n = 16)	3	6	2	4	0	1	0

Table 1.5 Obese Groups and Other Vegetable Consumption

	Did Not	1-3 Per Week	4-6 Per Week	1 Per Day	2 Per Day	3 Per Day	4 Per day
Non-Obese (n = 81)	45	28	3	2	1	1	1
Obese (n = 16)	8	7	1	0	0	0	0

Table 1.6 Obese Groups and Carrot Consumption

	Did Not	1-3 Per Week	4-6 Per Week	1 Per Day	2 Per Day	3 Per Day	4 Per day
Non-Obese (n = 81)	15	29	14	9	10	2	2
Obese (n = 16)	3	7	1	3	2	0	0

Table 1.7 Obese Groups and Fruit Consumption

THE RELATIONSHIP BETWEEN ATTACHMENT STYLES, SELF-ESTEEM, AND LONELINESS

Ny Thi Tran, McNair Scholar

Dr. Amy Hackney, Mentor
Psychology

Abstract

This study examines the relationship between adult attachment styles, self-esteem, and loneliness levels in intimate relationships. Adult attachment styles can provide useful structure in the study of social skills and adjustment. Participants were 57 undergraduate students (41 females; 17 males) between the ages of approximately 18 to 25 years old who participated in the study in exchange for course credit. Participants responded to Rosenberg's Self-esteem, R-UCLA Loneliness, and Relationship Questionnaires scales. Based on the results of previous studies, it was hypothesized that participants with fearful attachment styles would show higher levels of loneliness and lower self-esteem scores than individuals with secure attachment styles. As expected, results showed that participants with a fearful attachment style had greater loneliness and lower self-esteem levels than participants with a secure attachment style. Results also indicated that participants with a dismissing attachment style had higher self-esteem and less loneliness than fearful participants. Statistical analysis showed no significant gender and ethnicity differences in attachment styles. The results are discussed with reference to previous studies and the limitations of the present research.

The Relationship Between Attachment Styles, Self-esteem, and Loneliness

One of the most important events that young adults face is the development of intimate relationships with other people. Building strong intimate relationships at a young age helps children mold their individual personalities and increases the development of social skills during adulthood (Deniz, Hamarta, & Ari, 2005). Close relationships can fulfill the need to belong and the need for self-esteem. In general, studies have found that intimate relationships can affect an individual's behavior, self-view, and social skills during interaction with others (Heaven, Silva, Carey, & Holen, 2004).

Attachment Theory

Attachment theory, as originally developed by John Bowlby in 1969 and revised by Mary Ainsworth in 1978, is the establishment of intimate and emotional bonds between the child and the parent in the beginning to help prepare the child for future intimate relationships (Bakker, Van Oudenhoven, & Van Der Zee, 2004; Belsky, 2002; Ireland & Power, 2004; Trusty, Ng, & Watts, 2005). The initial development of an individual's attachment is established during one's early childhood with his/her primary caregiver(s). The fundamental concept of attachment theory is that everyday individuals carry out their attachment style role automatically in their daily social life. In the 1980's,

the field of adult attachment began to evolve when researchers started to shift their focus to attachment styles in adult relationships and how they influence adults' behaviors and self-view in their current romantic relationships (Bakker et al., 2004; Reis & Grenyer, 2004).

Many studies (Deniz et al., 2005; Van Buren & Cooley, 2002) found that early attachment style patterns played a major role in the development of the child all the way to adulthood. Attachment styles can contribute to the development of an adult personality and behavior characteristic in future relationships with others. Previous studies have indicated that there is a link between an individual's actions and perceptual processes to the kind of attachment style the individual possesses (Broemer & Blumle, 2003).

Attachment Styles

Research in attachment style has increased dramatically in the past few decades (Cassidy & Shaver, 2002). Heaven et al., (2004) found results that suggested the function of attachment styles is a "social presentation" in shaping an individual's personality in future close relationships. Many researchers believe that the use of attachment theory can guide us to a better understanding and treatment for psychological problems in the future (Reis & Grenyer, 2004).

Bartholomew and Horowitz (1991) created the four-category structure of adult attachment styles which consist of secure, fearful, preoccupied, and dismissing attachments. The four categories are based on individuals' models of self and how they act in their personal relationships. Based on Bartholomew and Horowitz's proposed relationship model, an individual can have a "positive view" or "negative view" in his/her relationship.

Secure and Fearful Attachment

The *secure* attachment style is characterized as upholding a positive view of self and others. Individuals with secure attachment styles tend to feel more comfortable in trusting and building close relationships with others. For example, Deniz et al. (2005) found that secure individuals tend to have high self-esteem. Secure individuals are also considered responsible, extroverted, trustworthy, supportive, as well as having high social skills with others. In contrast, individuals with a *fearful* attachment style view themselves as unworthy and have a lower self-image. They tend to not trust others and have poor social skills.

Preoccupied Attachment

The *preoccupied* attachment style is characterized as having a view of self as "not good enough" and sees others as more valuable than them. Preoccupied attachment tends to show lower self-esteem and fear of rejection and abandonment compared to secure attachment (Allen & Baucom, 2004; Bartholomew & Horowitz, 1991). Subjects affiliated with preoccupied styles tend to depend upon and follow others. They rely on others around them to help build their own self-esteem and personal character.

Dismissing Attachment

Finally, the *dismissing* attachment style is the opposite of preoccupied attachment. The dismissing attachment individuals possess a positive view of self but a negative view of others. They also have high self-esteem, controlling attitudes, and no empathy for others (Bakker et al., 2004). Individuals with a dismissing attachment style are less dependent on others but they desire another person's affection and love. One of

their problems is that they lack the ability to connect intimately with others because they are not very open with their emotions.

Personality and Social Skills

There is growing literature on the nature of attachment styles. Researchers have recently focused more on the effect of attachment styles on adult's social skills and personal characteristics. Some studies have found a relation between attachment styles and aggressive behaviors in adults, mainly in those with overt aggression and sex offenders (Ireland & Power, 2004).

Linking Self-esteem to Attachment Styles

Self-esteem can be defined as a person's evaluation of their own self-worth. In general, an individual may view him or herself in a positive or negative manner. According to Bylsma, Cozzarelli, and Sumer (1997), several studies indicated a clear relationship between attachment styles and self-esteem but few deeply investigated the specific nature of their links to one another.

Several studies have found that individuals with negative self-esteem resulted in major depression. In the U.S., depression has become one of the leading causes of the adolescent psychiatric population with suicide following thereafter (Teri, 1982). According to Reis and Grenyer (2004), individuals with preoccupied and fearful attachment styles were shown to have signs of depression. Research also supports that low self-esteem greatly contributes to depression (Tennen, Herzberger, & Nelson, 1987).

Loneliness Levels and Attachment Styles

The area of emotional loneliness has been explored by researchers to a certain extent in regards of its relationship to attachment styles. Loneliness is defined by Hobson (1974) as a basic characteristic which consists of pain from self and unsatisfying attention and relations with others.

Low self-esteem can cause major depression and loneliness and also influence behavior, mood, anxiety level, and close relationships (Loucks, 1980). Loneliness can result from feelings of isolation from others or emotional desertion. Attachment styles can also play a role in loneliness. For example, de Minzi and Sacchi (2004) showed that characteristics of relationships influence our own personal loneliness.

Gender and Ethnicity Differences in Attachment Styles

Little empirical research has directly focused on sex and ethnicity differences in attachment styles relating to self-concept. Reis and Grenyer (2004) showed that females with fearful attachment tend to have higher levels of depressive symptoms. Only a limited number of studies in the past have been conducted on gender and ethnicity differences in attachment styles and self-concept. It is reported by previous studies that preoccupied women tend to indicate higher levels of negative beliefs about their close relationships compared to preoccupied men (Kafetsios & Nezelek, 2002). Deniz et al., (2005) conducted a study with Turkish student's attachment style and social skills but they are one of the few researchers that have focused directly on the relationship of race influenced attachment styles. The study by Deniz et al. (2005) showed that students with a secure attachment style were found to have significantly higher social skills than those with insecure attachment (fearful and dismissing).

Purpose

The purpose of the present study was to examine the influence of adult attachment styles on an individual's self-esteem and loneliness levels. Many studies in the past have

focused mainly on childhood attachment styles but it is also important to understand adult attachment styles. Few studies have focused on how attachment styles can affect a person's behavior or social interactions with others. It was hypothesized that participants with fearful attachment styles would have lower self-esteem and higher loneliness scores compared to secure individuals.

In addition to examining attachment styles in adult's self-image, the final scores collected also provided the opportunity to explore the gender and ethnicity differences in the results. This can enhance our understanding of sex and racial differences in intimate relationships and find if the results are concurrent with previous studies.

Method

Participants

The participants were undergraduate university students (N= 57) between the ages of 18- 25 years old ($M= 20.6$, $SD= 1.4$) and consisted of 41 (72%) females and 16 (28%) males who participated in the study in exchange for course credit. The majority of the participants were White Americans (N=32, 56%), whereas 39% were Black Americans (N= 22), and 5% were reported as "Other" (N= 3).

Materials

Relationship Questionnaire

The adult Relationship Questionnaire (Bartholomew & Horowitz, 1991), see Appendix A, is a widely used attachment scale which consists of two parts reflecting negative and positive models of the self and others. This questionnaire was used as the predictor variable in the present study. The first part has four short paragraphs that describe a certain attachment style in relationships, and the participants were instructed to circle the paragraph that mostly corresponds to their close relationship style. The second part asked the participant to rate each attachment style according to their own personal relationship using a 7- point Likert scale ranging from 1 (not at all like me) to 7 (very much like me). The four paragraphs contained one of the following four attachment styles: secure, fearful, preoccupied, and dismissing.

Rosenberg's Self- Esteem Scale

Rosenberg's questionnaire (Rosenberg, 1989) was one of the criterion variables used in the study. This is comprised of 10 items relating to self-acceptance that uses a 4-point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree) that measures the participants' self-esteem level. The scores were added to find the sum which ranges from 0-30 with 30 representing the highest self-esteem. Scores between 15 and 25 were within normal range; scores below 15 suggest low self-esteem. The lower the score, the lower the participants' level of self-esteem (see Appendix B).

R- UCLA Loneliness Scale

The R-UCLA Loneliness questionnaire (Russell, Peplau, & Cutrona, 1980) was used as the last criterion variable in the study. The questionnaire was designed to measure a person's level of loneliness or isolation from others. The loneliness scale had two parts that were both calculated by the sum of the scores from all the items with higher scores indicating greater loneliness. The first portion consisted of 20 items that asked the participants to rate how they felt using a 4-point scale ranging from 1 (Never) to 4 (often). The second consisted of three items that asked them about how they felt about different aspects of their life using a scale ranging from 1 (hardly ever) to 3 (often) (see Appendix C).

Procedure

The experimenter introduced the research as a study of people's attitudes about close relationships. Participants were first given an informed consent form (see Appendix D) to review and sign. After signing the form, the participants were given the *Relationship Questionnaire* consisting of the four attachment style descriptions and three demographic items (age, ethnicity, and gender) to complete. Next, participants were handed the *Rosenberg's Self-Esteem Scale* to answer according to the directions. The last questionnaire the participants completed was the *R- UCLA Loneliness Scale*. All actual instrument names were not included in the forms that participants received in the study. Finally, after the questionnaires were completed all participants received the *Written Debriefing Form* (see Appendix E) to review.

Statistical Analysis Overview

The Bartholomew questionnaire was used as the predictor variable and the self-esteem and loneliness questionnaires were the criterion variables. Scores were calculated based on Bartholomew and Horowitz's (1991) Relationship Questionnaire model. Initial analysis of the Bartholomew model showed that 42% of the participants indicated that the secure attachment style best fit their character in close relationships, 30% the fearful type, 19% the dismissing type, and 9% the preoccupied type. Due to the lower sample size in the preoccupied category, these participants were dropped from further analyses. The main focus of the analyses was on the relation between the secure, fearful, and dismissing attachment styles to scores of self-esteem and loneliness scores. A MANOVA was calculated to determine if there were any differences between attachment styles on self-esteem and loneliness. All analyses $p < .05$ were agreed on as the criterion for establishing significant differences.

Results

Effect of Attachment Style

Means and standard deviations for self-esteem and loneliness in each attachment style can be found in Table 1. A MANOVA was conducted to examine the association of attachment styles to self-esteem and loneliness. Fearful, secure, and dismissing attachment styles were used as the predictor variable and Rosenberg's self-esteem (1989) and R-UCLA Loneliness (1980) as criterion variables. Univariate results revealed that participants with the secure attachment style had greater self-esteem ($M = 25.58$, $SD = 4.57$) than participants with the fearful attachment style ($M = 18.35$, $SD = 6.25$), $F(3, 57) = 4.61$, $p < .05$. Furthermore, participants with a dismissing attachment style had higher self-esteem ($M = 24.09$, $SD = 9.53$) than those with a fearful attachment style. Those with secure attachment indicated lower loneliness ($M = 13.08$, $SD = 5.78$) than those with fearful ($M = 26.35$, $SD = 12.33$) or dismissing ($M = 17.36$, $SD = 12.54$) attachment, $F(3, 56) = 7.17$, $p < .05$. (See Table 1).

Effect of Gender and Ethnicity

A MANOVA was used to find any gender and ethnicity differences in the attachment styles. Due to low sample size, the interactive effects of attachment styles in gender and ethnicity could not be assessed. Results on gender differences indicated that females ($M = 23.44$, $SD = 5.16$) did not have a significantly higher level of self-esteem than males ($M = 21.37$, $SD = 10.01$), $F(1, 57) = .182$, $p > .05$. Univariate results also suggested a lack in statistically significant differences between the two genders in loneliness ($F(1, 57) = 0.15$, $p > .05$).

Next, significant differences in ethnicity were evaluated by using attachment and ethnicity as the predictor variables and the loneliness and self-esteem scores as criterion variables. Univariate results suggest that there were no significant difference between Black ($M= 23.09$, $SD= 7.86$) and White ($M= 22.94$, $SD= 5.51$) levels of self-esteem, $F(2, 57) = 0.30$, $p > .05$. Similarly, there were no significant differences between Black ($M= 20.00$, $SD= 10.85$) and White ($M=17.84$, $SD= 10.29$) loneliness levels, $F(2, 57) = 0.12$, $p > .05$.

Discussion

The current study focused on the relationship between attachment styles, self-esteem, and loneliness in intimate relationships. It was hypothesized that individuals with fearful attachment styles have lower self-esteem and higher scores of loneliness compared to participants with secure attachment styles. Results supported the hypothesis indicating that fearful participants have very low self-esteem and high loneliness levels. Final results suggested no significant differences in gender and ethnicity in attachment styles.

The present study showed that attachment styles influence individual's perception of their self-concept. As the findings from this study suggest, attachment styles may play an important role in understanding psychological and behavioral processes of an individual in intimate relationships.

Results are very similar to prior studies (Allen & Baucom, 2004; Reis & Grenyer, 2004); the present study found that fearful individuals with low self-esteem tend to also have high levels of loneliness. As expected, individuals with fearful attachment style had the lowest scores of self-esteem because they tended to view their self-worth more negatively than secure individuals. Consistent with many previous studies (Bartholomew & Horowitz, 1991; Van Buren & Cooley, 2002), insecure individuals, such as fearful and dismissing, showed a lack of self-esteem and tended to exclude themselves from productive social environments.

In the present study, results did not indicate significant differences in gender and ethnicity between self-esteem and loneliness. Twenge and Crocker (2002) reported that many studies have found differences in ethnicity between Black and White participants that showed Black adults with higher self-esteem than White adults. In contrast to previous research, our analyses did not indicate a strong difference in gender loneliness levels, but females with fearful attachment had a slightly lower mean of loneliness than males with fearful attachment.

Limitations

There are several limitations to the present study. One of the main limitations is the small non-representative sample size of participants. The study had a larger sample of females than males which made it complicated to analyze the data for gender differences. Earlier studies have found few or no gender and ethnicity differences in attachment styles (Kafetsios & Nezlek, 2002). The small sample size also resulted in insufficient data on preoccupied attachment styles. A larger sample in the future study could possibly help analyze statistical data in the relation of all four attachment styles.

A significant limitation of the study relates to the different aspects of adult attachment style questionnaires that are available. There are limited numbers of attachment questionnaires that are best suited for empirical research. One main issue that needs to be addressed is the *type* of questions that are on attachment style questionnaires.

Tran: Attachment Styles, Self-Esteem, and Loneliness

An individual has only four choices of attachment styles and they must choose only one type of attachment that best suit their own behavior in close relationships. The problem with the option of only four choices is that it puts a limitation on the participant's true behavior in their relationships. If an individual is split in the middle of two attachment styles, they are forced to make a decision. If problems such as split attachment styles occurred, then that particular attachment questionnaire is not the best questionnaire to use for psychological research because researchers' data analyses can be skewed and inaccurate.

Directions for Future Research

Current results suggest several directions for subsequent research. Future research needs to focus more on the effect of attachment styles on the individual's adjustment in their social life and self-image in their current relationship. For example, future studies could manipulate attachment style or manipulate the salience of attachment style to observe its' causal effects. Possibly, future studies can use alternative directions in measuring loneliness and self-esteem, such as a combination of open-ended questions and use of the Likert scale. According to Scheff and Fearon (2003), the use of scales to define and test for self-esteem levels has reached its limit of significance because there are currently over 200 different scales that supposedly measure self-esteem. Future studies need to focus on the development of improved self-esteem measurements that can eliminate small effect sizes and Type 2 errors in data analyses.

The absence of significant gender and ethnicity differences in attachment styles and self-esteem proposes a demand for future replication of the study. Future studies will focus on larger and more diverse samples to evaluate the nature of an individual's attitude and behaviors in relation to attachment styles.

References

- Allen, E. S., & Baucom, D.H. (2004). Adult attachment and patterns of extradyadic involvement. *Family Process, 43*, 467- 488.
- Bakker, W., Van Oudenhoven, J., & Van Der Zee, K. I. (2004). Attachment styles, personality, and Dutch emigrants' intercultural adjustment. *European Journal of Personality, 18*, 387- 404.
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244.
- Belsky, J. (2002). Developmental origins of attachment styles. *Attachment & Human Development, 4*, 166- 170.
- Broemer, P., & Blumle, M. (2003). Self- views in close relationships: The influence of attachment styles. *British Journal of Social Psychology, 42*, 445- 460.
- Bylsma, W. H., Cozzarelli, C., & Sumer, N. (1997). Relation between adult attachment and global self-esteem. *Basic & Applied Social Psychology, 19*, 1- 16.
- Cassidy, J., & Shaver, P.R. (2002) *Handbook of attachment: Theory, research and clinical applications*. New York: Guilford.
- Deniz, M. E., Hamarta, E., & Ari, R. (2005). An investigation of social skills and loneliness levels of university students with respect to their attachment styles in a sample of Turkish students. *Social Behavior and Personality, 33*, 19- 32.
- Heaven, P. C. L., Silva, T. D., Carey, C. & Holen, J. (2004). Loving styles: Relationships with personality and attachment styles. *European Journal of Psychology, 18*, 103- 113.

Tran: Attachment Styles, Self-Esteem, and Loneliness

- Hobson, R. F. (1974). Loneliness. *Journal of Analytical Psychology, 19*, 71- 89.
- Ireland J. L., & Power, C.L. (2004). Attachment, emotional loneliness, and bullying behavior: A study of adult and young offenders. *Aggressive Behavior, 30*, 298-313.
- Kafetsios, K., & Nezlek, J. B. (2002). Attachment styles in everyday social interaction. *European Journal of Social Psychology, 32*, 719- 735.
- Loucks, S. (1980). Loneliness, affect, and self-concept: Construct validity of the Bradley Loneliness Scale. *Journal of Personality Assessment, 44*, 142- 147.
- Reis, S., & Grenyer, B. F. S. (2004). Fearful attachment, working alliance and treatment for individuals with major depression. *Clinical Psychology & Psychotherapy, 11*, 414- 424.
- de Minzi, R. M. C., & Sacchi, C. (2004). Adolescent loneliness assessment. *Adolescence, 39*, 701- 709.
- Rosenberg, M. (1989). *Society and the adolescent self-image*. Middletown, CT: Wesleyan University Press.
- Russell, D., Peplau, L.A., & Cutrona, C.E. (1980). The Revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology, 39*, 472-80.
- Sheff, T. J., & Fearon, D. (2003). Cognition and emotion? The dead end in self-esteem research. *The Study of Self Esteem*, 1-16.
- Tennen, H., Herzberger, S., & Nelson, H. F. (1987). Depressive attributional style: The role of self-esteem. *Journal of Personality, 55*, 631- 660.

Teri, L. (1982). Depression in adolescence: Its relationship to assertion and various aspects of self-image. *Journal of Clinical Child Psychology, 11*, 101-106.

Trusty, J., Ng, K., & Watts, R. E. (2005). Model of effects of adult attachment on emotional empathy of counseling students. *Journal of Counseling & Development, 83*, 66- 77.

Twenge, J., & Crocker, J. (2002). Race and self-esteem. *Psychological Bulletin, 128*, 371- 408.

Van Buren, A., & Cooley, E. L. (2002). Attachment styles, view of self and negative affect. *North American Journal of Psychology, 4*, 417- 430.

Tran: Attachment Styles, Self-Esteem, and Loneliness

Table 1

Association of Attachment Styles, Self-esteem, and Loneliness

Attachment Style	Female and Male		
	N	M	SD
<hr/>			
Self-esteem			
Secure	24	25.58	4.58
Fearful	17	18.35	6.25
Dismissing	11	24.09	9.53
Loneliness			
Secure	24	13.08	5.78
Fearful	17	26.35	12.33
Dismissing	11	17.36	12.54

Appendix A

RELATIONSHIP QUESTIONNAIRE 1

1. Gender? Male____ Female____
2. How old are you? _____
3. What is your nationality? _____

Step 1

1) Following are descriptions of four general relationship styles that people often report. Please read each description and **CIRCLE** the letter corresponding to the style that best describes you or is closest to the way you generally are in your close relationships.

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Tran: Attachment Styles, Self-Esteem, and Loneliness

Step 2. Please rate each of the relationship styles according to the extent to which you think each description corresponds to your general relationship style. Based on this scale:

1	2	3	<u>Rating Scale</u>	5	6	7
Not at all like me			Somewhat like me			Very much like me

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depends on me. I don't worry about being alone or having others not accept me.

Not at all like me			Somewhat like me			Very much like me
1	2	3	4	5	6	7

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Not at all like me			Somewhat like me			Very much like me
1	2	3	4	5	6	7

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Not at all like me			Somewhat like me			Very much like me
1	2	3	4	5	6	7

D. I am comfortable without close emotional relationships, it is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Not at all like me			Somewhat like me			Very much like me
1	2	3	4	5	6	7

Appendix B

QUESTIONNAIRE 2

BELOW IS A LIST OF STATEMENTS DEALING WITH YOUR GENERAL FEELINGS ABOUT YOURSELF. IF YOU **STRONGLY AGREE**, CIRCLE **SA**. IF YOU **AGREE** WITH THE STATEMENT, CIRCLE **A**. IF YOU **DISAGREE**, CIRCLE **D**. IF YOU **STRONGLY DISAGREE**, CIRCLE **SD**.

		1. STRONGLY AGREE	2 AGREE	3. DISAGREE	4. STRONGLY DISAGREE
1.	I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
2.	I feel that I have a number of good qualities.	SA	A	D	SD
3.	All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
4.	I am able to do things as well as most other people.	SA	A	D	SD
5.	I feel I do not have much to be proud of.	SA	A	D	SD
6.	I take a positive attitude toward myself.	SA	A	D	SD
7.	On the whole, I am satisfied with myself.	SA	A	D	SD
8.	I wish I could have more respect for myself.	SA	A	D	SD
9.	I certainly feel useless at times.	SA	A	D	SD
10.	At times I think I am no good at all.	SA	A	D	SD

Tran: Attachment Styles, Self-Esteem, and Loneliness

Appendix C

QUESTIONNAIRE 3

Step 1 Directions: Indicate how often you feel the way described in each of the following statements. *Circle* one number for each.

<i>Statement</i>	<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>
1. I feel in tune with the people around me	1	2	3	4
2. I lack companionship	1	2	3	4
3. There is no one I can turn to	1	2	3	4
4. I do not feel alone	1	2	3	4
5. I feel part of a group of friends	1	2	3	4
6. I have a lot in common with the people around me	1	2	3	4
7. I am no longer close to anyone	1	2	3	4
8. My interests and ideas are not shared by those around me.	1	2	3	4
9. I am an outgoing person	1	2	3	4
10. There are people I feel close to	1	2	3	4
11. I feel left out	1	2	3	4
12. My social relationships are superficial	1	2	3	4
13. No one really knows me well	1	2	3	4
14. I feel isolated from others	1	2	3	4
15. I can find companionship when I want it	1	2	3	4
16. There are people who really understand me	1	2	3	4
17. I am unhappy being so withdrawn	1	2	3	4
18. People are around me but not with me	1	2	3	4
19. There are people I can talk to	1	2	3	4
20. There are people I can turn to	1	2	3	4

Step 2 Directions: Indicate how you feel about different aspects of life. For each one, *circle* the number that mostly applies to how often you feel that way.

<i>Question</i>	<i>Hardly Ever</i>	<i>Some of the time</i>	<i>Often</i>
How often do you feel that you lack companionship?	1	2	3
How often do you feel left out?	1	2	3
How often you feel isolated from others?	1	2	3

Tran: Attachment Styles, Self-Esteem, and Loneliness

Appendix D

Close Relationships and Attitudes Toward Self

Statement of Informed Consent

1. I am Ny Tran, a student in the Ronald E. McNair Post- baccalaureate Program.
2. Purpose of the Study: The purpose of this research study is to have a better understanding of the relationship between intimate partners relating to their self- esteem and loneliness level.
3. Procedures to be followed: Participation in this research will include completion of three questionnaire forms which will be used to measure your attitudes about close relationships and personal self- image.
4. Discomforts and Risks: There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions are personal and might cause discomfort.
5. Benefits: You might learn more about yourself by participating in this study. You might have a better understanding of how important relationships are to you. You might realize that others have had similar experiences as you have. This research also may provide a better understanding of how relationships affect college students. This information could help plan programs, make student services better. This information might assist students in handling their own intimate relationships.
6. Duration: It will take about 25 minutes to complete the questions.
7. Statement of Confidentiality: Only the person in charge, and his/her assistants, will know your identity. If this research is published, no information that would identify you will be written.

8. Right to Ask Questions: Participants have the right to ask questions and have those questions answered. The person in charge will answer you questions. You also can contact the researcher advisor, Dr. Amy Hackney at 912- 681- 5749, with questions. If there are any questions about the rights of research participants to please contact the Office of Research Services and Sponsored Programs for answers at the email oversight@georgiasouthern.edu or call (912) 486-7758

9. Compensation: Participants will receive no compensation for completing this experiment.

10. Voluntary Participation: You do not have to participate in this research. You can end your participation at any time by telling the person in charge. You do not have to answer any questions you do not want to answer.

11. Penalty: There is no penalty for deciding not to participate in this study. You may decide at any time you don't want to participate further and may simply withdraw.

12. You must be 18 years of age or older to consent to participate in this research study.

Principal Investigator: Ny Thi Tran, PO BOX 10910, thiny_tran@georgiasouthern.edu

Faculty Advisor: Dr Amy Hackney, 912-681-5749, ahackney@georgiasouthern.edu.

You will be given a copy of this consent form to keep for your records.

If you consent to participate in this research study and to the terms above, please sign your name and indicate the date below.

Participant Name (print): _____

Signature: _____ Date: _____

Tran: Attachment Styles, Self-Esteem, and Loneliness

Appendix E

Written Debriefing Form

Debriefing for Survey Research: Attachment Styles: Self- esteem and loneliness levels

Thank you for participating as a research participant in the present study. This is a survey research. The questionnaires you answered included the identification of your attachment style in relationships and the measure of your self- esteem and loneliness scale. The purpose of this study is to evaluate the participants' intimate relationship with their partner as a link to low self- esteem and self loneliness. I expect to find the participants that indicate a fearful or anxious attachment style will show lower self- esteem scores and higher loneliness levels.

We ask you to maintain confidentiality about the purpose of the study since any pre- knowledge of the purpose will bias the data for that person and thus cannot be used. As a reminder, your results are confidential to the researchers.

Your generosity and willingness to participate in this study are greatly appreciated. Your input will help contribute to the advancement of the field of the relationship attachment styles in self- esteem and loneliness levels.

If you have any questions regarding this research project, please e-mail me, Ny Tran, at thiny_tran@georgiasouthern.edu. Dr. Hackney is supervising this research. If you have any other questions or concerns you may reach her at 681- 5749, or via email at ahackney@georgiasouthern.edu.

A lot of research in psychology depends on the participation of individuals like yourself. We're very grateful for your help. Thank you very much for participating.

A CONTENT ANALYSIS OF CONVERSATIONAL INTERRUPTIONS ON THE APPRENTICE AS INFLUENCED BY GENDER AND STATUS

Victoria Westmoreland, McNair Scholar

Dr. Pamela Bourland-Davis and Dr. Olivia Edenfield, Research Mentors
Department of Communication Arts

Abstract

Reality television has grown in popularity over the past few years. Many studies have been conducted on gender in media, especially related to gender role stereotypes and the portrayal of women in advertising. It seems as though men and women are cast to act in roles that are traditional to societal notions of what type of nature and position that each gender should exemplify. In order to explore this concept, this study researches gender roles and status in reality television based on the breakout hit The Apprentice. The show features a capable group of men and women, competing for a high status position working for Donald Trump, a very successful business man who is well known for accomplishments in real estate, and the entertainment industry. A content analysis of the boardroom conversations and ensuing interruptions provides an understanding of one subtle way in which gender stereotypes may be perpetuated.

Introduction

For those who are unfamiliar with particular groups and situations, television provides a means to see the way in which certain categories of people behave and how these defining characteristics motivate the way in which these various groups participate in and are viewed by society. In the case of reality programs, some viewers believe that the way people appear to conduct themselves on television is a true representation of how these same individuals would behave in the real world. A number of viewers see “reality” television as just that, reality. In turn, television tends to perpetuate the same stereotypes and expectations that it has popularized. Media and popular culture are locked in a cyclical relationship, each shaping the other. The purpose of this study is to determine whether gender stereotypes based in the workplace are perpetuated on television and whether gender affects differences in communication patterns in the workplace.

Certainly, the images and ideas expressed on television also reflect current trends in popular culture. The workplace is one of the many areas which is exemplified on television. Women presently have the right to work and generally have the same job opportunities that men have. Workplaces today have reflected that great strides in improvement toward equal rights have been made over the years. Nevertheless, “popular representations of the workplace have tended to construct women as unsuited to management and leadership roles” (O’Sullivan et. al, p.14 1999). The assumption is that this research will help isolate differences in communication patterns between men and women in managerial positions and will help to illustrate how gender may still play a role in their credibility and in their advancement in their organizations.

The Apprentice has been a success from the start. The show debuted on the National Broadcast Company in January of 2004, and it scored the highest rating of any new show introduced in the 2003-04 season. Just ending its third season, the show is still growing in popularity. Men and women of equal achievement and status are brought together to compete for the apprenticeship. The contestants, or applicants as they are referred to by Donald Trump, all have been successful in their own fields and are some of the top competitors in their particular lines of work. In each episode, the contestants are divided into two teams, and they compete in a variety of tasks in which one person from each team is elected as project manager and leads his or her team through the assigned task. The losing team faces Donald Trump and two of his business associates in the boardroom to explain why it did not win, and then a member from that team is fired. The winner of the program is hired as an “apprentice” to Donald Trump and is offered a position in the Trump Organization, where he or she will earn a six-figure salary.

The primary focus of this study is to interpret the way in which men and women communicate while in high profile positions in their work environment and how that may affect their advancement in the workplace. A content analysis of the boardroom conversations and ensuing interruptions provides a means for understanding one subtle way in which gender stereotypes may be perpetuated.

Review of Literature

Over the years, many studies have been conducted on the role of gender on television. The most popular area of study involving gender and television has been the advertising industry. Stereotypes in advertising have been subjects of particular interest. Because of the short time period to develop stories in commercials, advertisers often rely on stereotypes for character development. Sexual explicitness in print and television advertising has also been an area of interest for many researchers. There has been a rising trend in sexual explicitness of advertising over the past twenty years. In the late 1980's, research found that women were being used more than men as “sex objects” in order to sell products. As the years progressed into the late 1990's, there has been a significant rise in amount of advertisements using men as “sex objects,” but that rise still has not come near to the amount of women being portrayed the same way (Carstarphen et. al, 1999). There is also a large amount of sexual explicitness used in reality television, which is a merge of advertisements and entertainment (Deery, 2004)

An analysis of sex-role stereotyping over the last 25 years has been conducted by Furnham and Mak. The results of the study showed that the portrayal of women and stereotypes was consistent to the social conscience of the times; over the last twenty five years, the commercials have changed selectively to reflect popular notions of the time periods. Women have more often been shown visually while men have more often been the voice-overs of commercials. As far as credibility, the study found that “males are frequently portrayed as interviewers or professionals while females are more likely to have dependent roles” (Furnham et. al, p.419 1999). Analysis has also been done on audience response to stereotypes based on gender. Studies have found that “both sexes respond most favorably to exclusive portrayals of their own gender. In addition, females exhibit the least favorable reactions to advertisements featuring female models in roles superior to males” (Orth et. al, p.87 2004).

Findings from recent studies conclude that “...the media often serve as guidance for audiences” (Gantz et. al, p.348 2003). Berkowitz, Duffy, Lafky, and Steinmaus

conducted a study to determine whether stereotypes in magazine advertisements have an effect on people's perceptions of gender roles. In the study, high school students observed magazine advertisements. Half of the advertisements contained stereotypical images of women cleaning or taking care of the children. The other half of the advertisements illustrated women in non-traditional roles: in the workplace or playing sports such as golf. Students then responded to questionnaires that asked about the qualities of the women in the ads. Although the findings were not overwhelming, the study provided evidence that "there are differences in the ways males and females cognitively process visual images," and even brief exposure to stereotypes depicted in advertising can affect viewers' standpoints (Berkowitz et al, p.385 1996).

The study, "Ms Representations", observes how popular culture illustrates "the kinds of resistance women continue to experience in non-traditional domains such as management" (O'Sullivan et al, p.15 1999). The article analyzes popular movies that feature women in managerial roles. Recurring themes about women in senior management positions are that they are "unnatural," and that women in higher positions in organizations cannot truly be happy because women want to have families but are unable to do so when they hold high positions in their organizations. "Televisions working women continue to be portrayed significantly less often than working men as decision makers, as assertive cooperative politicians, and as societal and economically productive working persons" (Vande Berg et al., p.205 1992). This absence of a representative amount of successful women in executive positions can give weight to notions that women are not properly suited to roles involved with important decision making. "Not only do such 'fictions' provide us with illustrations of popular and widespread notions of social conventions in themselves but even as fictions they are not so easy to separate from 'reality' or 'fact' – especially in terms of their impact on popular perceptions" (O'Sullivan et. al., p.14 1999).

"As suggested, women are socialized to be other-oriented, submissive, nurturing, and primarily concerned with creating and maintaining relationships. These are qualities generally assumed to be incompatible with 'having an argument,' and are manifested in both nonverbal and verbal ways" (Brinson et. al, p.27 1997). Women in the work place, in fictional roles on television, are generally portrayed in two different extremes; they are either in secretarial roles and are not challenging to men in higher positions in matters of the workplace, or they are in roles of executives, who are cold-hearted and seemingly overly aggressive in order to compete with their male counterparts, and they are without any familial connections.

Study of the image of men and women on television is a common trend in research, but the communication among them has not been studied yet. According to Gantz et. al (2003), "...language plays a central role in the creation and development of media characters"(Gantz et. al, p.347 2003). Interruptions send strong non-verbal messages. There are three types of interruptions: positive interruptions, which are mainly intended for clarification; neutral interruptions, which are impartial to the topic; and negative interruptions which contradict what is being stated. "Negative interruptions are often referred to as overlaps, although some overlaps are not considered to be negative" (Hickson et al, p.33 2004). An overlap is when one person is talking and another person overlaps the first conversation with his or her own. This is done in most interruptions. A negative interruption, in the non-verbal sense, is a way of disregarding what another

person is saying. The majority of studies find that men interrupt more often than women and that men use interruption as a form of dominance to control conversation (Stewart et al, 1990).

Brinson and Winn (1997) examined conflicts between men and women on daytime talk shows. Their primary focus was to analyze the way in which men and women argued in these shows. They found that men and women exhibited no real differences in their argumentation styles or behaviors, but women tended to dominate the arguments. It is important to note that the conflicts that were studied were of a social nature. Past studies have found that women do seem to dominate arguments about social issues but it is contrary in work-related issues where men seem to dominate (Gantz et al, 2003).

In their study, Gantz and Zhao observed the interruptions between people in prime-time television dramas and sitcoms. Previous studies on gender in association with interruptions have found dissimilar results. Different methods of coding and analyzing interruptions were found to be the problem. The researchers came up with a coding system that specified whether interruptions were disruptive or cooperative to solve this problem and tested it for reliability. They then coded conversations involving interruptions, looking at who interrupted whom, whether the interruption was disruptive or cooperative, the status of the people involved, and whether it was inside or outside of a work environment. The study found that 33% of the times, interrupters were of higher status, 55% equal status, and men interrupted women more than women interrupted men when the topic was work-oriented (Gantz et al, 2003).

Method

In "Disruptive and cooperative interruptions in prime-time television," Gantz and Zhao (2003) conducted a content analysis of the way in which men and women interrupted each other on fictional television programs. Based on suggestions for further study on the topic, this research builds on their analysis by delving into the non-fictional arena. This study, then, adapts Gantz and Zhao's work by incorporating a similar content analysis of a show from the reality television genre.

The use of a reality television program differs from the previous study because, unlike fictional television, reality television provides non-scripted conversations, although these conversations are obviously edited. The Apprentice provides an excellent forum for this study; it is centered on communication and the workplace and is, therefore, an ideal focus. Because the show is based on a working environment, this study can focus on interruptions that are centered on the topic of work. The use of the first season is important because there are no preconceived notions about how the show should progress or the way people should conduct themselves.

The coding scheme was devised by looking at cooperative and disruptive interruptions. Eight categories were developed to examine the boardroom interruptions:

1. Interrupters are the people who do not wait for the initial speaker to finish a thought before speaking.
2. Interrupted persons are those who are speaking initially and are cut off by another person; their complete thoughts have not been expressed yet. An interruption is determined by whether the initial speaker has completed his or her sentence. Cues such as pauses and body gestures signal when a person is done making a statement.

3. Status is defined in three categories: positive, negative, and neutral. A positive interruption is involved when a person of higher status interrupts a person of lower status. In this case, the status would be considered positive if Mr. Trump, or his two business associates, interrupts one of the applicants. Neutral interruptions involve two people of equal status. This occurs if Trump associates interrupt each other or if the candidates interrupt each other. Negative interruptions occur when a person of a lower status or rank interrupts a person of higher status. This would be the case when an applicant interrupts Mr. Trump or his associates.

4. Gender is defined as either male or female.

5. Topics of the interruptions were defined as either work-related or social. All work related interruptions would be more geared toward performance on the task and abilities as a leader. Social interruptions are more geared toward friendships, questions of a person's character, or love interests within the group; all things that happen outside of given tasks.

6. Interruptions are defined in two broad categories—disruptive and cooperative. Disruptive interruptions include five categories: Disagreements, in which the interrupter disputes an opinion; Disconfirmations, in which the interrupter disputes facts; Rejections, in which the interrupter disputes a suggestion; Changes, in which the interrupter changes the topic or tries to talk to a different person; and Clarification, in which the interrupter asks questions about a statement which is made. Cooperative interruptions include four categories: Agreements, in which the interrupter concurs with a statement; Understanding, in which the interrupter adds to the comprehension of the idea; Interest in topic, in which the interrupter shows enthusiasm or curiosity toward a statement; and Clarification, in which the interrupter calls attention to additional information to explain what is being stated.

7. Additional notes include who is in the boardroom and what particular situation is at hand while people are in the boardroom.

8. Attention called to interruptions will be studied as well with regard to attention being called to that interruption and whether the initial speaker with the floor is successful in finishing his or her statement without being interrupted again.

Each episode of The Apprentice includes at least three distinct scenes: the applicants in their living quarters, the applicants at the worksite of their projects, and the applicants in the boardroom. Focusing on the boardroom conversations allows for the inclusion of status because, when in the boardroom, the applicants speak directly with Donald Trump and his associates. The boardroom scenes offer four different segments: the first meeting includes all of the applicants along with Trump and his associates, and the winner of the project assigned is announced. The second meeting includes the losing team along with Trump and associates to give the team a chance to explain why it lost; at the end of this meeting, the project manager selects two other teammates to come back to the final boardroom meeting. Trump and his associates are the only ones who remain in the third meeting during which they deliberate on the performance of the three applicants who will return to the final meeting. In the final meeting, the three applicants meet with Trump and associates to explain why they should not be fired, and at the end of that conference one person is fired.

Results

Of the 15 episodes in season one of the apprentice, 14 were coded in this study. All of the scenes that were broadcast involving new boardroom conversations were coded. Episode 11 was not subject to coding because it was a review show which aired highlights from previous episodes and had no new scenes involving the boardroom. A total of 283 interruptions were identified, averaging 20 interruptions per episode.

H1 stated that males would be more likely to use disruptive interruptions and females would be more likely to use cooperative interruptions. The men accounted for 70% of the total interruptions; 163 disruptive interruptions (58 %) and 34 cooperative interruptions (12 %). The women accounted for 30% of the total interruptions; 66 disruptive interruptions (77 %) and 20 cooperative interruptions (23 %).

H2 stated that status would play a role in the distribution of interruptions in that there would be more positive interruptions than negative interruptions and the least amount of interruptions would be negative. From the final amount of interruptions, there were a total of 142 positive interruptions, 67 negative interruptions, and 74 neutral interruptions.

RQ1 asked whether, after controlling for status, people of the same gender would interrupt each other before interrupting a person of the opposite gender. In the case of positive interruptions, men accounted for a total of 130 interruptions, 70 of which were male versus male; 60 of which were male versus female. Women accounted for a total of 12 interruptions, 7 of which were female versus female, 5 of which were female versus male. In the case of negative interruptions, men accounted for 24 of the interruptions; 21 of which were male versus male; 3 of which were male versus female, women accounted for 43 of the total interruptions; 3 of which were female versus female; 40 of which were female versus male. In the case of neutral interruptions, men accounted for 43 of the interruptions; 33 of which were male versus male; 10 of which were male versus female, women accounted for 31 of the interruptions; 14 of which were female versus female; 17 of which were female versus male.

RQ2 asked whether gender and status would play a role in calling attention to interruptions when they occurred. There were 5 successful instances of attention being called to an interruption. Of the 5 instances, 4 were made by males and 1 was made by a female; 3 of the instances were called upon by the male of the highest status (Donald Trump).

Discussion

Hypothesis one was somewhat proven. Men accounted for 70% of the total interruptions coded. The men seemed to interrupt more often in order to take control of the topic or to change the focus of the conversation in a little more than a third of their total interruptions. At the start of the show, the applicants were divided into two teams, men against women. In the first four episodes, the women won all of the projects and did not have to go to the boardroom meetings, other than the first when the results of the task were announced; so four episodes involved men exclusively, with the exception of Caroline, one of Trump's associates. This may partially account for why almost one third of the interruptions were by males.

Hypothesis two was proven. Over half of the total interruptions made were positive. The negative interruptions had the least amount, but it was only less than the

neutral interruptions by 7 interruptions. Most of the positive interruptions were made by Donald Trump, the person with the highest status and the ultimate decision maker.

There was no significant difference in the amount of times a person of one gender would interrupt a person of another gender in comparison with an interruption of a person of the same gender.

In the successfulness of calling attention to an interruption in order to finish an initial statement, high status had a strong influence. After a person of lower status made a complaint about being interrupted by Donald Trump, Mr. Trump stated, ““When you are trying to be chosen by someone, you don’t interrupt them and say let me finish...” After that statement, no other person called attention to any interruptions made by Donald Trump. It is interesting to note that Kwame Jackson and Bill Ramsik, the final two applicants to make it to the end of the show, interrupted the least amount of times (other than one other person who was voted off on episode 3).

Suggestions for Further Study

Because this is a sample from just one season, with a set cast of characters, personality types could skew the results. In the future, other seasons and entire episodes could be included to lessen this possibility.

The data was collected from an environment in which participants had to contend and also had to have ongoing relationships with other participants. The boardroom is where applicants have to state their cases so they will not be fired; a less competitive environment may show a better case for cooperative and disruptive interruptions because there may be less of a need to discredit what a person is saying.

Further studies could be conducted to find out whether viewers of the show feel that they can relate to it; for instance, do they feel that conversations in their workplaces are similar to those on the show.

References

Berkowitz, D., Duffy M., Lafky S., and Steinmaus, M. (1996). Looking through gendered lenses: Female stereotyping in advertisements and gender role expectations. *Journalism and Mass Communication Quarterly*, 73(2), 379-388.

Brinson, S. L., & Winn, J. E. (1997). Talk show's representations of interpersonal conflicts. *Journal of Broadcasting & Electronic Media*, 41(1), 25-38.

Carstarphen, M., Lambiase J., Morgan S., and Reichert, T. (1999). Cheesecake and beefcake: No matter how you slice it, sexual explicitness in advertising continue to increase. *Journalism and Mass Communication Quarterly*, 76(1), 7-20.

Deery, J. (2004). Reality TV as advertainment. *Popular Communication*, 2(1), 1-20.

Furnham, A., & Mak, T. (1999). Sex-role stereotyping in television commercials: A review and comparison of fourteen studies done on five continents over 25 years. *Sex Roles*, 41(5/6), 413-438.

Gantz, W., & Zhao, X. (2003). Disruptive and cooperative interruptions in prime-time television fiction: The role of gender, status, and topic. *Journal of Communication*, 53(2), 347-362.

Hickson III, M., Stacks, D., & Moore, N. (2004). *Nonverbal Communication Studies and Applications*. 4th ed. Los Angeles: Roxbury Publishing Company.

Orth, U. R., & Holancova, D. (2004). Men's and women's responses to sex role portrayals in advertisements. *International Journal of Research in Marketing*, 21(1), 77-89.

O'Sullivan, J., & Sheridan, A. (1999). Ms representations: Women, management and popular culture. *Women in Management review*, 14(1), 14-21.

Stewart, L., Stewart, A., Friedley, S., & Cooper, P. (1990). *Communication between the sexes: Sex differences, and sex role stereotypes*. 2nd ed. Scottsdale, AZ: Gorsuch Sacrisbrick.

Vande Berg, L. R., & Streckfuss, D. (1992). Prime-time television's portrayal of women and the world of work: A demographic profile. *Journal of Broadcasting & Electronic Media*, 36(2), 195-207.

GENDER DISPARITY IN CRIMINAL SENTENCING: CHIVALRY AT WORK IN GEORGIA?

Ebony C. Whitfield, McNair Scholar

Dr. Christine Ivey-Edge
Psychology
Dr. Franceys Johnson
Political Science
Research Mentors

Abstract

This study investigates possible disparities in the sentencing of women and men in the courts of the state of Georgia. Extant research suggests that female and male offenders receive disproportionate sentences for similar criminal offenses. Many researchers explain this phenomenon in terms of the chivalry hypothesis, suggesting that male judges assume a paternalistic role to shield women from severe punishment. Such gestures are assumed to result in women receiving more lenient treatment in sentencing than men who have committed comparable crimes. An examination of the possible influences of legal and extralegal variables in criminal sentencing for the offense of first-degree forgery in the state of Georgia was completed. Data was obtained from the Georgia Department of Corrections website through the Georgia inmate query. Information obtained from these documents included the legal variables of offense severity (number of counts), sentence length and prior imprisonment history. The extralegal variables of the defendant's age, race and gender were also collected. This research was conducted in an effort to enhance the understanding of the role that gender plays in judicial determinations of punishments for female and male offenders, thus facilitating the creation of a more just legal system.

Introduction

In the past, much research has been conducted to discover which circumstances play key roles in punishment for wrongdoing. These studies revealed that it was not only the circumstances surrounding the sentencing, but the individuals who assign retribution that play a major part in the dispensing of justice. Though the justice system is established as a system free of bias, many discrepancies began to emerge. Two types of disparity that were identified were warranted and unwarranted disparities.

Warranted disparities are due to variation in legal factors, while unwarranted disparities appear due to the introduction of extralegal factors (Bushway & Piehl, 2001). Legal factors such as prior imprisonment and offense severity along with extralegal factors such as parental status, race and gender could all have an effect on sentencing. Should a judge decide to consider these items, the established justice system could be rendered useless. This research is an exploration of the impact of several legal and extralegal variables on sentencing outcomes for both male and

female defendants. However, greater emphasis will be placed on the extralegal variable of gender.

Recent research by Staffensmeier, Ulmer and Kramer suggests that certain ethnic groups are sentenced more harshly. Stricter sentencing, it is proposed, is imposed on young black males more so than on individuals who are female, white and/or elderly (Staffensmeier, Ulmer and Kramer 1998). They also found that women and the elderly are two groups considered by authorities to be “less dangerous and lesser risks to community safety” (Staffensmeier, 1998, p.12). Mustard (2001) notes that the defendant’s number of prior offenses plays a major role in both judicial discretion and the sentencing of the defendant. Moreover, he contends that the defendant’s educational level factors into the sentence received (Mustard, 2001). Criminals with higher education levels are looked at less favorably than their uneducated counterparts.

Though these inconsistencies in sentencing have been proven in a myriad of studies, some researchers maintain that no inequalities exist between men and women in sentencing; these researchers suggest that sentencing guidelines have worked to alleviate any gender differences in sentencing (Renzetti, 1995). The aforementioned opposing viewpoints discussed with regard to gender disparities in sentencing have aroused the interests of many individuals, thus prompting multiple researchers to investigate the “justness” of sentencing in criminal cases.

Judicial discretion has a significant impact on sentencing and therefore, on gender disparity. When judges choose to sentence based on their own discretion, sentencing guidelines become ineffective (Small, 2005). Sentencing guidelines have been implemented in many states in an effort to work toward uniformity in sentencing, therefore putting an end to disparity. However, there are no sentencing guidelines in the state of Georgia. In fact, there has been much debate about whether there is a need for guidelines. The last Georgia governor to push for sentencing guidelines was former governor Roy Barnes. He developed The Governor’s Commission on Certainty in Sentencing. Comprised of prosecutors, law enforcement officials, judges, defense attorneys and victims’ representatives, this team’s goal was to come up with sentencing recommendations (Gelb, 2003). Ex-governor Barnes saw this as a way of managing the overcrowded prison conditions. Unfortunately, his efforts never gave way to established sentencing guidelines in the state of Georgia.

Currently, the state of Georgia is using sentence review panels to ensure fairness in sentencing. Each panel is composed of three superior court judges and a panel member who is appointed by the council president. However, the defendant must request that their sentence be reviewed by the panel and they must do so within thirty days of the day that they are sentenced.

Over the last twenty years, many studies have investigated gender differences on judicial sanctioning (Bickle & Peterson, 1991). Consistently, research findings support the chivalry hypothesis during the sentencing severity stage in criminal justice processing (Curran, 1983; Farrington & Morris, 1983; Kruttschnitt, 1984; Wilbanks, 1986). Numerous studies reveal that women are demonstrably less likely than their male counterparts to receive prison sentences (Pollock-Byrne, 1990). To contextualize the present issue of gender disparity in sentencing, the perceptions of the female offender and the nature and extent of her offending throughout history must be reviewed.

Female criminality, though not as heavily researched as that of male criminality, has not been a rare occurrence. In the past, the crimes that women tended to commit were mostly minor offenses (namely petty theft and prostitution). In late seventeenth and early eighteenth century England, petty theft and prostitution were the most common offenses (Beattie, 2001). Maids and servants of noblemen and women used their positions to pilfer goods. Prostitution was viewed

negatively due to its potential to corrupt males of the era by instilling within them certain immoral habits (Beattie, 2001).

Some individuals suggest that women began participating in criminal behavior due to changes in society. It is proposed that severe societal changes, for example, poverty, immigration and the growing chasm between the rich and poor gave way to new types of crime (Smalls, 1999). In today's society, women are mostly sentenced for minor property offenses (Pollock-Byrne, 3). The 1960s and 1970s in the United States were a time when women demanded to be treated as equals. Theorists began to correlate the women's liberation movements to an increase in female criminality (Pollock-Byrne, 22).

Punishments for crimes in earlier periods tended to be quite harsh. Criminals were commonly beaten, dismembered, branded and even executed for breaking the law (Beattie, 2001). Deeming such sanctions too harsh for women, judges often opted to spare female offenders from such horrific punishments. As a means of protecting women from such insufferable sanctions, many female criminals were pardoned.

The punishment of female offenders (their incarceration in particular) noticeably differed from that of male offenders in earlier times. Traditionally, women's prisons were established for rehabilitative purposes. It was commonly believed that women were more receptive to rehabilitative measures than their male counterparts (Belknap, 2001). They are known to be milder institutions than male institutions, but the lack of emotional connections with familiar individuals often proves devastating for most female inmates. (Pollock-Byrne, 1990) Pollock-Byrne explains this phenomenon as she states, "The impact of imprisonment is, we believe, more severe for females than for males because it is more unusual" (Pollock-Byrne, 1990, 129).

Indiana Women's Prison, which opened its doors in 1873, was the first all-women penal institution in the United States (Eyman, 1971). After its creation, numerous female penal institutions emerged across the United States. These institutions reduced the sexual exploitation of female prisoners by male prisoners and prison staff (Pollock-Byrne, 1990). We also began to see women participating in types of punishment usually deemed only for men, for example chain gangs.

However, the perception of the female offender as less menacing than the male offender was fleeting. Increasingly, criminal justice authorities were no longer accepting the image of women as "delicate creatures who required the protection and supervision of men" (Conley, 1995). Women who murder or commit robberies are viewed as more masculine and are consequently sentenced more harshly (as a male would be). To clarify, these women are punished because they are seen as having broken traditional female roles; this is referred to as the evil woman hypothesis (Belknap, 2001). These women do not receive the chivalrous treatment that may be applicable to women who conform to traditional gender stereotypes (Belknap, 2001).

Despite the shifting conceptions of female criminality and how best to address her criminal behavior, many studies indicate that women continue to fair better than men in terms of sentencing for similar crimes. Belknap (2001) notes that many researchers reference the "chivalry hypothesis" in explaining the leniency exhibited in the sentencing of women offenders. Also known as the paternalism thesis hypothesis, the chivalry hypothesis can transform the relationship between judge and defendant into an interaction between a man and a woman. The judge, if male, could allow his paternalistic feelings to interfere with his ruling. It is believed that the chivalrous attitudes of judges may affect how they sentence women. This discretion is unjust because males do not receive the same protective treatment when in similar situations.

Through the years, there has been growing support for the existence of the chivalry hypothesis in the sentencing phase of criminal justice processing. Chivalry is believed to exist during the sentencing phase on account of male judges wanting to excuse women for their criminality (Pollock-Byrne, 1990). Judges, themselves, have remarked on their bias towards women offenders. They hesitate to send women to penal institutions that may have insufficient staff and unpleasant facilities (Renzetti and Curran, 1995). An investigation of the chivalry hypothesis and its impact is vital to the study of courts. It is possible that the alleged chivalrous nature of the judges could be the key factor that influences judicial discretion. In order for chivalry to be controlled, judges must be controlled.

Though the chivalry hypothesis conceivably continues to impact sentencing, other factors may also play a role in this process (Steffensmeir cited in Pollock-Byrne, 1990). Factors other than gender potentially affect judicial discretion and sentencing; for example, race, age, marital status, occupation, past criminal history and whether or not the defendant has children are potential factors (Renzetti, 1995). Hedderman and Gelsthorpe argue that sentencing disparities result from judges' unwillingness to impose certain sentences on women because their children may be detrimentally affected (Harper, 103). Beattie (2001) contends that female defendants receive less punitive sentences because they commit fewer threatening offenses.

In 1998, women made up twenty-nine percent nationwide of all property crimes, including burglary, larceny and motor-vehicle theft. Of all felons convicted of forgery, fraud and embezzlement, women accounted for forty-one percent. More men commit violent offenses than women, and this could cause the chivalry hypothesis to look significant when in fact, it is that women do not commit violent offenses. It was necessary to find a crime that both men and women participate in, in similar numbers, in order to test and to study the chivalry hypothesis. The comparable numbers of male and female offenders in the offense category of forgery make it a feasible crime to examine the role that gender plays in sentencing.

The present study seeks to determine if disparities in sentencing exist in the area of gender. For the purpose of this study, it is hypothesized that women will receive more lenient sentences when compared to men who committed similar offenses. It is assumed that they will receive shorter sentences, if they are incarcerated at all. In addition to gender, other extralegal and legal factors will also be considered to determine if gender acts alone in triggering disparity, or if it acts in combination with other factors to produce such disparities.

Methodology

Data Collection

The present research was conducted in the state of Georgia. A sample was taken from all inmates who were incarcerated in 2004 in the state of Georgia for the offense of first-degree forgery. An individual has committed forgery in the first degree when they “knowingly make, alter or possess any writing in a fictitious name or in such manner that the writing as made or altered purports to have been made by another person, at another time, with different provisions, or by authority of one who did not give such authority and utters or delivers such writing” (Georgia Criminal and Vehicle Handbook, 140). The offense of forgery in the first degree is punishable by no less than one and no more than ten years of imprisonment.

Access to inmate profiles was provided by the Georgia Department of Corrections website. The year 2004 was selected because it represented the most recent and complete set of data. The sentences received by female and male offenders for first-degree forgery in 2004 was the focus of the experiment.

The Georgia Department of Corrections staff collected a list of all inmates imprisoned in 2004 for this offense. Cases were selected randomly to ensure representativeness. The sample included 393 inmates out of a population of 1,315. Sampling rules state that for populations over one thousand, a sample of thirty percent will be necessary for accuracy. Thirty percent of this particular population would have been 395 inmates; however, there were two inmates from a race that was underrepresented in the data and they were omitted from the sample. The sample consisted of one hundred and thirty women and two hundred and sixty three men with an average age of thirty-five. Race was almost equally distributed, with 49.6 percent of the inmates being Caucasian and 50.4 percent of the inmates being African American. All of these inmates were incarcerated in 2004 in penal institutions in the state of Georgia for the offense of first-degree forgery.

Sentence length, measured in months, was the established dependent variable (In this study, thirty days was considered one month.). Independent variables included both the legal considerations of number of present offenses and prior criminal record. The number of present offenses or number of counts was used to determine the severity of the offense. Therefore, the more counts an individual had, the more severe his case became. The extralegal considerations included the defendants' gender, race/ethnicity and age. These demographics were taken because they were all relevant to the study of disparities, specifically gender disparities. Also, due to limited data, these were the most important factors of the few that were available. Names or other identifying information were not taken from the records. Each case was assigned a number independent of its criminal case number.

Data Analysis

This study was a secondary analysis of data that was already collected by the Georgia Department of Corrections. Once data coding was completed, a series of multiple regressions were conducted to ascertain whether there appeared to be any established relationships between the legal and extralegal variables. Multiple regression analyses predict the score of one factor from the scores of the other factors. In this way, we can see all of the relationships among the various traits at the same time. This was, in my opinion, the best method of investigating the various factors that were tested for. These analyses determine how much weight each factor pulls in the overall score. The coefficient of determination (r^2) estimates the amount of variability in scores on one factor that can be explained by the other factor. SPSS (the Statistical Package for the Social Sciences) was used to conduct all quantitative data analyses.

Results

After running several multiple regression analyses, it was found that the independent variables of race, gender, number of counts and prior imprisonment only accounted for seven percent of the disparity between offenders incarcerated for first degree forgery in 2004 ($r^2 = .074$). This model does not include the age variable due to the fact that age reduced the variance explained. The hypothesis, that females would receive shorter sentence lengths than men who had committed comparable crimes, was not supported. Two of the independent variables, both legal factors, did play a significant role in the sentence length that inmates received. Prior imprisonment and severity of the offense both had an impact. This was to be expected since those criminals who recidivate are punished more harshly and those who commit more serious crimes are punished more harshly. The lack of influence on the parts of the other factors such as age and gender, leads me to believe that there must be other factors that influence the sentence length of the offender besides legal and extralegal factors that were tested. The race variable was insignificant as well, but it only just missed being significant with a value of .057.

Shortcomings

Several shortcomings of this study were identified in the process of conducting this research. The initial plan was to explore the impact of chivalry by interviewing judges about discretion and looking at the sentences that the defendants received based on the beliefs of the judge who presided over their case and the influence of the independent variables. At the state level, I did not have access to information about the judges who ruled in each case. And in Bulloch County, the original cite of the research, I was unable to obtain data on sentencing. Therefore, I had to change the emphasis of my study from one county to the entire state of Georgia and omit the interviews of the judges. This made my data more representative of sentencing in the entire state of Georgia, including Bulloch County, but the results cannot be used to make any assumptions about sentencing or judicial discretion in Bulloch County.

Although most inmates had only one count of first-degree forgery against them, several others had anywhere from three to eighteen counts. So, when the number of counts were taken from the profiles of the inmates on the Georgia Department of Corrections website, they were averaged together. There may be some criticism for my decision of not using the hierarchy rule, in which the severest offense is the one that is taken into consideration. Also, the Georgia Department of Corrections website only lists the imprisonment that occurred in the state of Georgia. An inmate may have served time for the same offense in another state. Criminal history from other states is often used in sentencing, and judges would have access to that information, whereas I was unable to obtain access to extended criminal histories. This information could be significant in sentencing.

This study does not include any of the typical offenders who commit first degree forgery. The data in this study does not include any of the defendants who were not sentenced to incarceration. The inmates in this study were all serious offenders. It is possible that judicial discretion and evidence of chivalry could be found in the sentencing records of those individuals who were spared time in an institution. A better analysis of the impact of chivalry could be taken if all offenders were included, not just those who were imprisoned.

It is also important to note that the council of the defendants plays a role in sentencing. If their council is appointed, they may get less of a defense than someone who was capable of hiring a lawyer of their own.

A lack of extralegal variables on the website could also have influenced my study. Factors like, marital status, education level, parental status and severity of the crime were left out. Extant research shows that it is possible that factors such as these play a major role in sentencing. Access to this information would be difficult to obtain, without interviewing each defendant and, as a college student, approval to access prisons would be difficult to acquire from the Institutional Review Board at the undergraduate level.

As far as judicial discretion is concerned, there was a lack of data from the judges themselves. In an effort to further explore the chivalry hypothesis, interviews with judges could have given more insight into why there are disparities and what characteristics of a defendant the judge takes into consideration before making their ruling. This study, therefore, cannot be used to make any inferences about judicial discretion or the influence of chivalry in the state of Georgia. It is, however, an excellent starting point for further examination of the chivalry hypothesis and judicial discretion.

Based upon the results of this analysis, subsequent analyses can be conducted to further explore the interactions of gender with other variables in sentencing decisions for female and male offenders. However, access to more information about each inmate will be necessary in

order to determine if other factors, such as marital and parental status, have a greater impact.

Impact of this Study

Sentencing disparities, be they the result of gender or other extralegal consideration, arguably compromise the justness of the criminal court system. As the trend over the last two decades has been to minimize such disparities in sentencing through use of mechanisms such as sentencing guidelines, the chivalry evidenced by judges toward female offenders in earlier times is assumed to be waning. However, many recent studies appear to confirm the existence of the chivalry during sentencing, and this proves problematic on a number of levels. In the case of the state of Georgia, the lack of sentencing guidelines seems to be working. The fact that there are stipulations on sentencing that are set in the laws may, in some way, serve as a type of unofficial sentencing guideline.

Further Research

This study is of great use to individuals in academia all over the nation. It explores the interaction of various factors and suggests that these factors have no significant role in sentencing in the state of Georgia. With these variables factored out, there can be further investigations to pull out what other factors influence judicial discretion. Once those factors are identified, more steps can be taken to end disparities in the judicial system, either by teaching judges about discretion or by implementing sentencing guidelines.

The goal of the American criminal justice system is reducing harm to its citizens. Its foundation is the idea that all are equal before the eyes of the law, and that the crime (and not the criminal) will be judged. However, arguably, it could be said that a system with no emotion could do more harm than good. It could be that certain extralegal factors are what make our system more just. It is possible that these factors have to be taken into consideration in order for judges to make informed decisions and reduce harm for the larger group of individuals, not just the defendant. For example, hypothetically speaking, a mother of three is convicted of drug trafficking. Should she be sentenced to prison, her children would become wards of the state, (if she had no relatives to care for them). It is in the states' best interest to allow the mother a lighter sentence so that she can still care for her children. This punishes the criminal, reduces harm to the children and saves the state the costs of incarceration. Society would say that an analysis of all extralegal factors would be necessary to ensure that a criminal's life had nothing to do with his crime.

These ideas create a stalemate in the justice system. No consideration of extralegal variables may cause the justice system to be seen as inhumane, while too much consideration could lead to a bias penal system. Yet, no matter how you look at it, differential treatment based on gender, or any other extralegal consideration, still conceivably advantages one while simultaneously disadvantaging another.

References

- Beattie, J. M. (2001). Policing and Punishment in London, 1660-1750: Urban Crime and the Limits of Terror. New York: Oxford University Press.
- Belknap, J. (2001). The Invisible Woman: Gender, Crime and Justice. Boulder, CO: University of Chicago.
- Bickle, G. S. and Peterson, R. D. (1991). The Impact of Gender-based Family Roles on Criminal Sentencing. Social Problems, 38, 372-394.
- Bushway, S. D. & Piehl, A. M. (2001). Judging Judicial Discretion: Legal Factors and Racial Discrimination in Sentencing. Law and Society Review, 35, 733-764.
- Conley, C. A. (1995). No Pedestals: Women and Violence in late Nineteenth Century Ireland. Journal of Social History, 28, 801-819.
- Covington, S. (2002). A Woman's Journey Home: Challenges for Female Offenders and Their Children. Institute for Relational Development, 127-148.
- Curran, D. (1983). Judicial discretion and defendants' sex. *Criminology*, 21, p. 41-58.
- Daly, Kathleen. (1994). Gender, Crime and Punishment. New Haven and London: Yale University Press.

Dixon, J. (1995). The Organizational Context of Criminal Sentencing. The American Journal of Sociology, 100, 1157-1198.

Duff, R. A. (2001). Punishment, Communication and Community. Oxford University Press: New York.

Duncan, R. W., Speir, J. C. and Meredith, T. S. (1999) The Effects of Adopting North Carolina's Sentencing Guidelines in Georgia. Georgia Public Policy Foundation, 1-15.

Engen, R. L. and Steen, S. (2000). The Power to Punish: Discretion and Sentencing Reform in the War on Drugs. The American Journal of Sociology, 105, 1357-1395.

Eyman, J.S. (1971). Prisons for Women: A Practical Guide to Administration Problems. Illinois: Bannerstone House.

Farrington, D. and Morris, M. (1983). Sex, sentencing, and reconviction. *British Journal of Criminology*, 23, p.229-248.

Feeley, M. M. and Little, D. L. (1991). The Vanishing Female: The Decline of Women in the Criminal Process. Law and Society Review, 25(4), 719-757.

Gelb, A. (2003). Sentencing Plan Would Free Up Logic. Center on Juvenile and Criminal Justice, 1-2.

Georgia Criminal and Vehicle Handbook. (2002). U.S.A.: J & B Gould.

Greenfield, L. A. & Snell, T. L. (2000). Bureau of Justice Statistics Special Report:
Women Offenders. National Crime Journal, 1-14.

Haas, K. C. and Alpert, G. P. (1986). The Dilemmas of Punishment: Readings in
Contemporary Corrections. Waveland Press: Illinois.

Harper, R. L., Harper G. C. & Stockdale, J. E. (2002) The Role and Sentencing of Women in
Drug Trafficking Crime.

Koons-Witt, B. A. (2002). The Effect of Gender on the Decision to Incarcerate Before
and After the introduction of Sentencing Guidelines. Criminology, 40(2), 297-312.

Kruttschnitt, C. (1981). Social status and sentences of female offenders. *Law and
Society Review*, 15, p.247-265.

Muraskin, Roslyn. (2000). It's a Crime: Women and Justice. New Jersey: Upper Saddle
River.

Mustard, D. B. (2001). Racial, Ethnic and Gender Disparities in Sentencing: Evidence
from the U.S. Federal Courts. Journal of Law and Economics, 44, 285-315.

Myers, A. & Hansen, C. (2002). Experimental Psychology. California: The Wadsworth Group.

Pollock-Byrne. (1990). Women, Prison and Crime. California: Brooks/Cole Publishing Company.

Pontell, H. N., & Shichor, D. (2001). Contemporary Issues in Crime and Criminal Justice. New Jersey: Upper Saddle River.

Renzetti & Curran. (1995). Women, Men and Society. Boston: Allyn and Bacon.

Severy, M. (Eds.). (1969). National Geographic Society: The Age of Chivalry.

Small, D. (2005). Disparity v. Discretion. National Law Journal, 26, 23.

Steffensmeier, D. & Demuth, S. (2000). Ethnicity and Sentencing Outcomes in U.S.

Federal Courts: Who is Punished More Harshly? American Sociological Review, 65, 705-729.

Steffensmeier, D. & Hebert, C. (1999). Women and Men Policymakers: Does the Judge's

Gender Affect the Sentencing of Criminal Defendants? Social Forces, 77, 1163-1197.

Steffensmeier, D., Ulmer, J., & Kramer, J. The Interaction of Race, Gender and Age in

Criminal Sentencing: The Punishment Cost of Being Young, Black and Male.

Criminology, 36 (4), 763-798.

Wilbanks, W. (1986). Are females treated more leniently by the criminal justice system?

Justice Quarterly, 3, p. 517-529.