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Resilience as a Mediator of the Relationship Between Negative Life Events and Psychological Well-Being

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RESILIENCE AS A MEDIATOR OF THE RELATIONSHIP BETWEEN NEGATIVE LIFE
EVENTS AND PSYCHOLOGICAL WELL-BEING

by

ANNA L. FAIRCLOTH

(Under the Direction of Jeff Klibert)

ABSTRACT

The relatively young field of positive psychology serves to redirect the focus of common psychological investigation and intervention on factors that *deplete* well-being, toward characteristics and experiences that *promote* happiness and well-being (Seligman & Csikszentmihalyi, 2000). Two features that have been consistently associated with measures of psychological well-being are resilience and negative life events (Avey et al., 2010; Shonkoff et al., 2012). The current study examined the relationship between negative life events, well-being, and resilience. Specifically, the study was designed to determine if resilience mediates the relationship between negative life events and psychological well-being among emerging adults. Participants were 325 college students (166 women; 158 men) who independently completed an online assessment comprised of the Connor-Davidson Resilience Scale (CD-RISC), Inventory of College Students' Recent Life Experiences (ICSRLE), and Ryff Scales of Psychological Well-Being (RSPWB). A cross-sectional and correlational design was implemented to analyze the data. Results indicate that the study's main variables were related in the expected directions and that resilience partially mediated the relationships between negative life events and the six indices of well-being. Theoretical and clinical implications are discussed.

Index Words: Negative life events, Well-being, Resilience, Emerging adults

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B.S., Valdosta State University, 2011

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CHAPTER 1: INTRODUCTION

Psychological well-being is defined broadly as positive psychological functioning (Ryff, 1989). It is associated with happiness and positive affect, and is often discussed as a reflection of overall life satisfaction. Previous research indicates that one's state of well-being may be influenced by his or her thoughts, behaviors, and emotions, as well as by external experiences (Diener, Lucas, & Oishi, 2005). Well-being is associated with multiple factors, such as positive physical health, contentment within interpersonal relationships, and higher levels of education (Dolan, Peasgood, & White, 2008). Well-being appears to be an important factor in helping individuals find meaning and develop positive outlooks on life (Diener et al., 2005). Such a position is supported by high correlations between well-being and the pursuit of happiness in an active and healthy manner. For example, individuals who experience high levels of well-being often report engaging in positive behaviors such as volunteering, socializing, and self-motivation (Diener et al., 2005). Overall, theory and empirical findings conjointly support the position that well-being can be defined as a culmination of positive processes and experiences that contribute to one's sense of life satisfaction and wellness.

Ryff (1989) considers psychological well-being to be a multidimensional construct comprised of six different indices: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. This differs from traditional conceptualizations of well-being as a unidimensional concept, often simply defined as an individual's subjective level of happiness (Andrews & Withey, 1976; Bradburn, 1969; Bryant & Veroff, 1982; Diener, 1984). By deconstructing well-being into multiple dimensions, a more encompassing and accurate depiction of an individual's positive functioning may be considered. Ryff's (1989) model of psychological well-being describes six channels by which well-being and

positive functioning may be achieved and provides clinicians and researchers insight into areas of cognitive and interpersonal functioning that directly influence overall mental health. Largely, this model supports domain specific pathways by which clinicians can promote well-being given a specific set of contexts. For instance, when a deficient area of functioning associated with well-being is identified, interventions may then be augmented according to the individual's needs and more effective treatment may ensue. Moreover, this multidimensional model of well-being engenders opportunities for clinicians to foster growth regarding unique positive emotions and behaviors that suit an individual's external environment, worldview, and cultural values (Ryff & Singer, 2008).

Rurality. A growing area of study is examining positive psychological outcomes among rural residents. Rural residents are often affected by unique circumstances not experienced by individuals in non-rural areas (Slama, 2004). For instance, rural residents often experience significantly higher rates of stressors when compared to individuals residing in non-rural areas (Smith, Humphreys, & Wilson, 2008). Alternatively, previous research indicates that individuals living in rural locations are also more likely to have limited social, medical, and educational resources compared to individuals living in urban/suburban locations (Smith et al., 2008). According to Kelly et al. (2011), lower overall education and socioeconomic statuses are commonly reported among individuals living in rural geographic locations. Specifically, their study revealed evidence that rural residents report lower perceived support available when faced with adversity, which potentially results in lower levels of psychological well-being (Kelly et al., 2011). However, no known studies have found direct evidence to suggest that estimates of well-being differ among individuals from rural vs. non-rural areas. Thus, an exploratory function of

this study was to examine potential rural vs. non-rural differences in important positive psychological factors.

Promotional Factors. Previous research regarding psychological well-being has focused primarily on identifying depleting factors (i.e., factors that reduce the likelihood that an individual will pursue or express well-being; Augusto-Landa, Pulido-Martos, & Lopez-Zafra, 2011; Gage & Christensen, 1991; Wai & Yip, 2009; Wang, 2007). The literature is replete with studies that identify a wide range of interpersonal styles, personal dispositions, mood regulation strategies, and family dynamics that reduce well-being development. For example, pessimism is commonly associated with decreased levels of well-being (Augusto-Landa et al., 2011). Interpersonal conflicts and their subsequent interpretations have also been found to influence one's state of well-being. Specifically, reactive behaviors and attitudes that often result from perceived unresolved conflict such as avoidance, resentment, or rumination have been linked to decrements in positive psychological functioning (Wai & Yip, 2009). Depletion of well-being may also occur when a challenging role transition takes place such as when one enters parenthood or retires from a long held career (Gage & Christensen, 1991; Wang, 2007). Physical illness, financial instability, job instability, marital discord, and death of a loved one are just a few stressful life experiences that stymie well-being growth (Lyons, 1991).

Fewer studies develop empirical investigations aimed to identify factors that may promote positive development and/or maintenance of psychological well-being, especially in emerging adults. By identifying variables that promote high psychological well-being in emerging adults, insights may be gained concerning ways to facilitate global estimates of mental health. This is a sorely needed area of examination as emerging adults encounter numerous and stressful developmental challenges that often deplete optimal functioning (Arnett, 2000). For

instance, emerging adults often experience a pressure to create and achieve long term goals regarding careers and relationships. They often struggle with career indecision, and even those individuals who have chosen a goal career or established a relationship commonly experience self-doubt regarding their competency or ability. Moreover, the transition from adolescence to adulthood may engender distance and distress within social relationships. Overall, it is important to identify pathways by which emerging adults create and maintain a sense of well-being to better refine service-oriented approaches that ease developmental stressors associated with transitions from adolescence into adult life.

It is also important that researchers identify promotional factors within the context of well-established elements known to deplete well-being. Stressful life events, for instance, are important factors that often deplete individuals of well-being. However, research has demonstrated that stressful life events have a unique and theoretically complex relationship with well-being. For instance, Martin and Martin (2002) found evidence that only 50 percent of individuals who experience negative life events report decrements in psychological well-being. This finding suggests that a comprehensive understanding of the relationship between stressful life events and well-being has yet to be established. Examining the relationship between stressful life events and well-being through intervening variables may contribute to or support specific theories concerning who may be susceptible to report lower levels of general and mental health. One factor that may be beneficial in explaining how stressful life events are associated with decrements in well-being is resilience (Bonnano, 2004; Martin & Martin, 2002).

Purpose

Empirical evidence is needed to evaluate the role of resilience as a mediator between negative life events and well-being in emerging adults. In response to this need, the current study

aimed to examine several lines of inquiry. First, this study sought to determine if self-report of well-being by emerging adults varies by rurality (rural vs. non-rural). Second, the current study sought to determine if an inverse relationship exists between self-report of negative life events and indices of well-being. Third, the current study sought to validate previous research that suggests resilience is a promotional factor in the development of well-being. This was accomplished by determining if reports of resilience were positively associated with multiple indices of well-being. Fourth, the study sought to investigate resilience as a mediating variable in the associations between negative life events and well-being indices.

Significance

The relationships among psychological well-being, negative life events, and resilience are important for several reasons. Well-being is the foundational concept on which many if not most therapeutic interventions are designed, yet previous research reveals little insight on how positive psychological functioning may be increased. Assessment of the linear relationship between negative life events and estimates of resiliency may prove beneficial in terms of identifying individuals who experience low well-being. If significant relationships exist within our model, we may be able to offer clinicians a unique set of insights that will help them identify individuals at risk for depleted well-being and therefore provide opportunities for early intervention.

Identifying mediating variables may advance conceptualizations of the relationship between negative life events and well-being and may illuminate pathways by which individuals can increase their positive functioning. If a significant relationship between resilience and well-being is found, this may engender distinctive insights regarding the application of positive psychological interventions. By implementing interventions designed to promote resilience, clinicians will be able to assist clients in developing a set of resources that will ultimately help

them tolerate distress and withstand adversity as a means to increase overall psychological well-being.

Definitions

Well-being. Well-being has been defined as a state of happiness or contentment and is comprised of six core dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1989). Self-acceptance is defined as holding positive attitudes toward oneself, including current and past behaviors. Positive relations with others is defined by the presence of loving and reciprocal interpersonal relationships. Autonomy is defined as the ability to hold oneself to personal standards and is characterized by an internal locus of control and resistance to acculturation. Environmental mastery is defined as an individual's ability to choose or create suitable environments to meet his or her psychological needs. Purpose in life is associated with possessing beliefs that give one a sense of direction and meaning in life. Finally, personal growth emphasizes the importance of continued perseverance and expansion towards one's full potential (Ryff, 1989). In the current study, the six indices of psychological well-being served as the outcome variables.

Resilience. According to Connor and Davidson (2003), resilience is the ability to thrive when faced with adversity. Resilience may vary with age, gender, cultural origin, and context (Connor & Davidson, 2003). It is often characterized by an individual's ability to view a stressful or adverse experience in a positive light (Kobasa, 1979), tolerate negative affect (Lyons, 1991), strive toward personal goals (Rutter, 1985), and generate optimism (Connor & Davidson, 2003). In the current study, resilience served as the mediator variable.

Negative life events. Negative life events are defined by experiences that are perceived as undesirable and cause some significant distress. These "hassles" may range from minor

annoyances such as a traffic jam to fairly major difficulties such as the death of a loved one (Kanner, Coyne, Schaefer, & Lazarus, 1981). As a result of the distress often associated with these experiences, negative life events have been negatively correlated with estimates of physical and mental health (Kohn, Lafreniere, & Gurevich, 1990). In the current study, negative life events served as the predictor variable.

CHAPTER 2: LITERATURE REVIEW

Interest in human happiness and life satisfaction has been present in Eastern and Western philosophy for centuries, most recognizably within the writings of Aristotle on the concept of *eudaimonia*, which is often translated to denote happiness or well-being (Jorgensen & Nafstad, 2005). However, as the field of psychology and the study of human behavior have developed, interest and research regarding human behavior and emotion have been isolated to the study of disruptive or problematic behaviors and emotions that perpetuate psychopathology. Reasonably, the field of clinical psychology is designed to study and improve psychological well-being, justifying the considerable attention devoted to the relief of problematic symptomology by practitioners. However, some debate exists among clinicians regarding the possibility that focus on deficits has led to an over-emphasis on processes that predispose risk to mental health difficulties and a neglect of equally valuable human strengths that promote life satisfaction and psychological wellness (Jorgensen & Nafstad, 2005; Seligman & Csikszentmihalyi, 2000). Evidence to this point can be found in the rates by which mental health conditions are diagnosed. Specifically, the amount of diagnosable mental health disorders has multiplied vastly since the first edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders was issued in 1952, with over 300 mental disorders listed within the most recent 5th edition (American Psychiatric Association, 2013). Perhaps this increase of reported and diagnosable psychological distress is the result of a lack of attention regarding prevention strategies and models aimed to increase positive psychological functioning.

To evaluate the importance of positive emotional functioning and characterological strengths, attention must shift from experiences and symptomology associated with maladaptive psychological processes toward resources and traits that promote positive psychological

functioning. According to founders Martin Seligman and Mihaly Csikszentmihalyi (2000), positive psychological theory is defined as “a science of positive subjective experience, positive individual traits, and positive institutions” aimed to “improve quality of life and prevent the pathologies that arise when life is barren and meaningless” (pg. 1). Within this theoretical approach, the development of mental illness and poor psychological functioning can be at least partially attributed to a lack of protective positive qualities or experiences. Therefore, positive psychology aims to differ from mainstream psychological theory by focusing on *eudaimonia* and associated methods of life enrichment and motivation. Examination of such factors may serve to illustrate unique perspectives to preventing or overcoming factors that promote psychopathological conditions.

Considering mental illness, positive as well as negative emotion regulation is often disordered among individuals who experience mental health conditions such as anxiety, depression, and bipolar disorders (Carl, Soskin, Kerns, & Barlow, 2013). However, several positive psychological interventions have been associated with the promotion of positive emotion up-regulation and increases in overall well-being (Quoidbach, Berry, Hansenne, & Mikolajczak, 2010). For example, “savoring,” which involves reflecting on positive experiences, has been associated with increases in positive emotions. Also, “capitalizing,” which involves the act of celebrating or sharing positive personal experiences or emotions with others, has been linked to improvement of positive emotion regulation self-reports and overall life satisfaction (Carl et al., 2013; Quoidbach et al., 2010). Despite limited research regarding positive psychological theory, it appears there may be substantial advantages to further examining the outcomes of interventions and treatments of maladaptive emotional and behavioral concerns from a positive psychological perspective. Furthermore, “savoring,” “capitalizing,” and other

similar positive psychological strategies have been found to simultaneously down-regulate negative emotions in addition to promoting positive emotion up-regulation (Carl et al., 2013). As a result, it is important to consider the implications of positive psychological strategies as valuable resources for mitigating the effects of debilitating conditions, experiences, or processes including stressful life events and daily hassles.

Negative Life Events and Well-Being

Theoretical Connection. Everyday experience highlights the debilitating effects of stressful life events and daily hassles on psychological functioning. For instance, life stressors may result in a temporary change in one's mood or, in more extreme cases, may precede the development of such psychological disorders as depression, anxiety, and post-traumatic stress disorder (Monroe & Simons, 1991). It is for this reason that psychological models and theories have emphasized the unique contribution of stressful life events in the prediction of both positive and negative psychological outcomes.

Historically, there are numerous theories and models that account for the connection between stressful life events and lower levels of well-being. Selye's (1936) early conceptualization of the physiological "stress response," which occurs in reaction to both positive and negative stressful events, begins to outline the significant impact that stress can have on overall functioning. Selye's model suggests that multiple stages of the stress response exist, each eliciting a change in neuroendocrine, cardiovascular, pulmonary, and renal functioning. According to Taylor (1983), stressful life events also can affect an individual's psychological well-being by challenging his or her sense of meaning, mastery, and self-esteem. For example, a stressful event such as the development of a major disease or illness often results in the affected individual feeling powerless: lacking control of self and circumstances. Similarly, traumatic

events such as rape or assault often leave the victim with feelings of shame and a depleted sense of self-confidence. Janoff-Bulman's (1989) assumptive world theory, as well as various meaning making models (Park, 2010; Park & Folkman, 1997), suggest adverse psychological reactions that diminish well-being outcomes often correlate with the presence of stressful life events. Specifically, adverse life events challenge pre-existing schemas which in turn increase feelings of distress (e.g., confusion, low self-control, low mastery and agency) that diminish well-being (Park, 2010). Additional support for the connection between stressful life events and decreased accounts of well-being is presented within Aldwin and colleagues' (1996) deviation and amplification model. This model posits that a negative feedback cycle of thoughts and emotions is often established in reaction to an adverse experience. Such thoughts and emotions perpetuate chronic feelings of negativity, eventually straining psychological resources for well-being.

Hypotheses have been made suggesting that the existing elevation of psychological distress among disadvantaged populations may be explained by the increased likelihood of individuals within these groups to be exposed to stressful life events (Breslau, Chilcoat, Kessler, & Davis, 1999; Lucas, 2007; Turner & Lloyd, 1995). Diminished well-being has been revealed among individuals who have been exposed to long-term adversity such as poverty or chronic illness. Most notably, children exposed to chronic adversity have been found to experience greater difficulties in learning, behavior, and physiology, as well as experience lower self-esteem and mastery as compared to same-age peers (Shonkoff et al., 2012). Similarly, examination of military personnel has suggested a comparable connection between chronic adverse experiences and decreased well-being (Breslau et al., 1999; Buckman et al., 2011). For example, Buckman et al. (2001) found that those individuals deployed in the military for the longest duration and subsequently exposed to more long-term stress reported higher levels of distress and the greatest

decreases in overall well-being, as compared to their peers who were deployed for shorter spans of time.

Evidence to support the relationship between negative life events and diminished psychological well-being is extensive. Negative life events exist in a variety of forms, and have been correlated with poor psychological well-being across all ages (Shonkoff et al., 2012). Some stressful experiences are common to individuals of all ages and developmental stages, such as interpersonal loss. However, each developmental stage possesses unique adversity that may be related to diminished well-being. For instance, a common negative experience for a child is to be bullied by a peer, while common stressful experiences for an older adult include experiencing physical health difficulties or death of a spouse. However, far less is known about unique stressors that contribute to decrements in well-being for emerging adults. As a result, it is important to further investigate the relationship between unique stressors typically present in emerging adulthood and reports of well-being (Gomez, Krings, Bangerter, & Grob, 2009).

Young adults are often classified within a stage of development referred to as emerging adulthood. This stage is a period of transition, often characterized by the exploration of many social, academic, and employment avenues (Arnett, 2000). Within this exploration, emerging adults are likely to face momentous decisions and be challenged to adapt to changing environments. Previous research suggests that life experiences in general have a greater effect on the psychological well-being of young adults compared to individuals at other developmental stages (Gomez et al., 2009). Individuals who are developmentally more advanced typically possess fairly well-established personality traits and values, which may serve as anchors for well-being when adverse life events occur. Emerging adults, however, typically have less

established personality characteristics and values to rely on, indicating that emerging adults may have more difficulties overcoming stress in a way that promotes well-being (Gomez et al., 2009).

Distal Life Stressors. Poor psychological well-being has been consistently associated with stressful life events and difficult life transitions (Breslau et al., 1999; Buckman et al., 2011; Dolan, Peasgood, & White, 2008; Lucas, 2007; Seery, 2011). For instance, experiences such as physical and sexual abuse, neglect, and abandonment have been associated with diminished accounts of well-being, often impacting emerging adults' intrapersonal and interpersonal functioning (Briere & Runtz, 1986; English, 1998; Nurius, Green, Logan-Greene, & Borja, 2015). Research has consistently demonstrated that such distal adverse life events as child abuse (Edwards, Holden, Felitti, & Anda, 2003), interpersonal loss in childhood (Seery, 2011), and financial instability in childhood (Wandersman & Nation, 1998) are likely to result in significant distress symptoms that are commonly associated with decrements in well-being. Taken as a whole, retrospective and longitudinal studies firmly contend that the experience of childhood/adolescence adversity can have long-lasting effects on emerging adults' sense of well-being.

Proximal Life Stressors. The presence of temporary stressors is often assumed to have a less significant connection with life satisfaction than those events that are more long-lasting. For instance, many researchers assume that relatively minor hassles such as receiving a poor academic grade, receiving negative feedback on an assignment, or ending a short-term romantic relationship typically have limited effect on an individual's overall life course. However, some research suggests otherwise. Recent experience with adverse life events and daily hassles is consistently related to decrements in psychological well-being (Lu, 1999; Zautra, 2005). For instance, DeLongis, Folkman, and Lazarus (1988) conducted a study examining the effects of

daily stressors on couples over a six-month period and found a significant association between presence of daily hassles, as measured with the Hassles and Uplifts Scale, and declines in overall health and mood of participants. Specifically, individuals who reported a high presence of daily hassles over the course of the study reported higher accounts of anxiety, depression, physical pain, and nausea than those individuals with fewer reports of daily hassles. Similarly, Chamberlain and Zika (1990) found a connection between daily stressors and diminished well-being, and identified hassles to be better predictors of psychological distress and adaptation outcomes than major life events. Chamberlain and Zika (1990) found the stability of hassles occurring over time to be high. They used this finding to propose a 'minor events approach' to evaluating and predicting distress among individuals as an alternative to the common approach of evaluating stress primarily based on seldom occurring major life events. Additional evidence for the relationship between daily hassles and psychological well-being is provided through investigation of the effects of hassles occurring within the workplace. For instance, research conducted by Zohar (1999) suggests that individuals experiencing high hassle volume and severity are likely to engage in negative cognitive appraisal of future events, and are likely to report characteristics of diminished psychological well-being such as low-mood and somatic complaints, like fatigue.

Overall, the link between adverse life events and well-being is strongly supported in the literature. However, more information is needed with regard to how researchers can conceptualize the link between adverse life events and well-being. This may best be examined through indirect or mediated effects of relevant variable(s). The current study proposes that resilience may be an important factor to help clarify the connection between adverse life events and well-being.

Mediation Modeling

Mediation models are implemented to identify pathways that explain *how* a predictor variable is associated with an outcome variable (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). Psychological research using mediation modeling is particularly advantageous due to the ability to provide insight into complex psychological outcomes by identifying complex relational patterns among variables. Within a clinical setting, identification of mediator variables is highly valuable. Mediator variables provide clinicians a true focal point for psychological intervention. By identifying clear pathways by which complex psychological outcomes occur, mental health professionals are better equipped to devise and tailor appropriate and effective psychological interventions.

Resilience. Operational definitions of resilience are varied within the literature. Connor and Davidson (2003) describe resilience as a mechanism of stress coping ability. Similarly defined by Bonnano (2004), resilience is one's ability to maintain a stable psychological equilibrium; this is the counterpart to psychological vulnerability. According to these definitions, resilience differs from recovery, accounting not for one's ability to "bounce back" after a negative experience, but for one's ability to maintain a steady psychological state despite changing circumstances (Seery, 2011). However, Grych, Hamby, and Banyard (2015) describe resilience to include enhancement in psychological well-being following an adverse experience. In essence, resilience is considered a process whereby an individual rebounds and *grows in a positive direction* from stressful life events, whereas recovery implies that an individual just rebounds from a negative experience. Investigation of the role of resilience in mental health outcomes may provide mental health professionals with valuable resources regarding the promotion and maintenance of psychological health (Richardson & Waite, 2001). Additionally,

investigation and identification of specific factors that promote and deplete resilience may serve to shape therapeutic interventions to be more effective in promoting mental stability and overall well-being.

Research suggests that the presence or absence of resilience greatly affects an individual's response to adverse life events. Individuals with low resilience have been found to be more likely to experience psychological distress following an adverse life event than those individuals who report high resilience. For instance, Ong, Bergeman, Bisconti, and Wallace (2006) conducted a study examining the association between resilience and different indices of stress: daily stressors (e.g., being late for work) and stressful life events (e.g., the death of a spouse). Results indicate that differences in resilience accounted for variation in emotional responses following adverse experiences. High accounts of resilience resulted in weaker associations between the stressful event and the individuals' emotional state (Ong et al., 2006). Hardy, Concato, and Gill (2004) found similar results supporting a relationship between resilience and stressful life events. Among participants, those with high resilience were less likely to perceive an event as stressful when compared to individuals with lower reports of resilience (Hardy et al., 2004). Additionally, further evidence of an existing relationship between resilience traits and stressful life events was observed by King, King, Fairbank, Keane, and Adams (1998) in a study of Post-Traumatic Stress Disorder and associated psychological distress. Results revealed that resilience mediated the relation between stress and PTSD (King et al., 1998).

Furthermore, resilience is associated with psychological functioning and reports of well-being over time (Avey et al., 2010). For instance, He, Cao, Feng, and Peng (2013) found a positive correlation between psychological resilience and well-being. Participants with high

resilience were less likely to report significant psychological distress and were able to recover more quickly compared to those with lower reports of resilience. Similarly, McDermott, Cobham, Barry, and Stallman (2010) found evidence for a relationship between resilience and psychological well-being. Youth with past or current mental illness were more likely to have low scores on a measure of resilience, suggesting that lower levels of resilience are related to increased psychological distress and mental illness across time. Lee, Sudom, and Zamorski (2013) also found that resilience predicted significant amounts of variance in reports of psychological well-being and mental health.

According to Baron and Kenny (1986), a variable may be a viable candidate to serve as a mediator if it is empirically associated with the prescribed predictor and outcome variable of the model in question. Considering that resilience has been consistently associated with both negative life events (e.g., Hardy et al., 2004; King et al., 1998; Ong et al., 2006) and reports of well-being (e.g., Avey et al., 2010; He et al., 2013; Lee et al., 2013; McDermott et al., 2010), it meets criteria to be examined as a potential mediating variable. Notably, research indicates that the experience of negative life events does not necessitate decrements in well-being. In fact, Martin and Martin (2002) found that 50% of individuals who experienced a negative life event did not report emotional distress symptoms. This suggests that mediating factors, like resilience, may explain the pathways by which negative life events are related to fluctuations in well-being scores.

Current Study

Hypotheses. The long term goal of this study is to offer insights that promote the use of positive psychological interventions in the development and maintenance of psychological well-being. The current objective is to assess the role of resilience as a mediator between negative life

events and psychological well-being among emerging adults. Based on previous research, the current study hypotheses are: (a) stressful life events will be inversely related to unique indices of well-being, (b) estimates of resilience will be positively associated with indices of well-being and inversely associated with negative life events, and (c) resilience will at least partially mediate the relationships between negative life events and indices of psychological well-being.

CHAPTER 3: METHODOLOGY

Participants

Participants in the current study consisted of undergraduate students enrolled in psychology courses at a large southeastern university in the United States. A total of 333 students participated in the study. Eight individuals' responses were excluded from the final data set because their ages fell outside of the range of emerging adulthood, ages 18-25. The final sample consisted of 325 individuals, exceeding the minimum number of participants necessary to obtain the appropriate amount of statistical power (Green, 1991). The average age of the sample was 19.68. In response to the gender prompt, 166 participants identified as women (51.1%) and 158 participants identified as men (48.6%). One hundred and ninety-three participants identified as White/Non-Hispanic (59.4%), 100 as African American/Black (30.8%), 23 as other (7.1%), 4 as international students (1.2%), and 2 as Asian/Asian American (0.6%). Three participants did not provide information regarding their race. One hundred and thirty-five participants reported being reared in a rural area (41.5%) and 188 reported being reared in a non-rural area (57.8%).

Procedure

Participants were recruited from undergraduate students enrolled in psychology courses at Georgia Southern University. Students who chose to participate in this study were provided with a web link directing them to SurveyMonkey.com, a data-collecting site approved and supported by the researcher's dissertation committee. Students were initially directed to complete an electronic informed consent form. Written signatures were not possible for online surveys, so students who wished to continue with the survey provided their consent by clicking a button labeled "I give my consent to participate." Students choosing not to participate clicked a button labeled "I do not give my consent to participate," and were directed away from

SurveyMonkey.com. Students who voluntarily provided consent were directed to provide demographic information and then complete the measures detailed below. Following completion of the measures, participants were debriefed to the nature and purpose of the study, and were informed how to access free to low-cost mental health services if they felt any distress from participating in the study. To conclude, students were given instructions on how to receive credit for participating in the study.

Data Storage. Initially, all data were stored on SurveyMonkey.com. Once data collection was finished, the researcher transferred the data from the online site to SPSS. Once all data were successfully transferred, the researcher deleted all data from SurveyMonkey.com. Data transferred to SPSS will be stored on a secure, password-protected hard drive for seven years.

Measures

Conner-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). The CD-RISC is a 25-item self-report measure designed to assess resilience of adults (Connor & Davidson, 2003). Respondents assess each item based on how they have felt over the past month and are prompted to rate their agreement on each item using a 5-point Likert scale (0 = “not true at all,” through 4 = “true nearly all of the time”). Possible total scores range from 0 to 100, with higher scores reflecting greater resilience. The CD-RISC was normed on a diverse sample of adults. Psychometric evaluation of the CD-RISC for the general population indicated solid internal consistency ($\alpha = .89$) as well as excellent construct validity as demonstrated by a positive correlation with the Kobasa Hardiness measure ($r = .83, p < .0001$) and a negative correlation with the Perceived Stress Scale ($r = -.76, p < .001$; Connor & Davidson, 2003). In the current study, the CD-RISC had excellent internal consistency ($\alpha = .91$).

Inventory of College Students' Recent Life Experiences (ICSRLE; Kohn, Lafreniere, & Gurevich, 1990). The ICSRLE is a 49-item self-report measure designed to assess stressful life experiences of college students. Participants rate each item on a 4-point Likert scale according to the extent the described situation has applied to them over the past month (1 = "not at all part of my life," 2 = "only slightly part of my life," 3 = "distinctly part of my life," or 4 = "very much part of my life"). Possible total scores range from 49 to 196, with higher scores reflecting more stressful life experiences. The ICSRLE was normed on a sample of college undergraduates and has demonstrated excellent internal consistency ($\alpha = .88 - .89$). In addition, the ICSRLE was found to correlate positively with the Perceived Stress Scale ($r = .59 - .67, p < .0005$), indicating good construct validity (Kohn et al., 1990). In the current study, the ICSRLE had excellent internal consistency ($\alpha = .94$).

Ryff Scales of Psychological Well-Being (RSPWB; Ryff, 1989). The RSPWB is an 84-item self-report measure designed to assess the six dimensions of psychological well-being: self-acceptance ($n = 14$), positive relations with others ($n = 14$), autonomy ($n = 14$), environmental mastery ($n = 14$), purpose in life ($n = 14$), and personal growth ($n = 14$; Ryff, 1989). Participants rate their agreement on each item according to a 6-point Likert scale, with responses ranging from "strongly agree" to "strongly disagree." Possible scores on each domain range from 14 to 84, with higher scores indicating higher psychological well-being. Psychometric evaluation of the RSPWB has demonstrated excellent internal consistency ranging from .86 to .93 for the six domains: self-acceptance ($\alpha = .93$), positive relations with others ($\alpha = .91$), autonomy ($\alpha = .86$), environmental mastery ($\alpha = .90$), purpose in life ($\alpha = .90$), and personal growth ($\alpha = .87$). In addition, all domains of the RSPWB show good construct validity, with correlation coefficients ranging from .25 to .73 with established measures of positive psychological functioning (Ryff,

1989). In the current study, the six dimensions of RSPWB scale had solid internal consistency ($\alpha = .76-.91$).

Statistical Analysis

Numerous statistical procedures were executed in this study. A MANOVA was analyzed to determine mean differences in self-reports of negative life events, resilience, and well-being between individuals born in rural versus non-rural areas. To determine rural status, participants self-identified as being reared primarily in either a rural or non-rural area. Bivariate correlations were conducted to determine significant relationships among the study's variables. Six mediation models were constructed and analyzed to determine the indirect effects of resilience on the relationships between negative life events and indices of well-being. Construction of a mediation model for each of the six indices of well-being provides greater specificity within the findings regarding potential mediating variables.

Preacher and Hayes's (2004) bootstrap method of modeling was used to construct the mediation models. Preacher and Hayes posited that when looking at the effects of mediators, more accurate statistical results may be achieved using their bootstrap approach of analyzing data than when using a more commonly used statistical approach that operates based on assumptions about distribution sampling and shape. By bootstrapping data, difficulties with small-sample sizes and power may be avoided and, as a result, a more powerful analysis of the data is possible (Preacher & Hayes, 2004). In the models analyzed, scores on the ICSRLE reflective of negative life experiences were the predictor variable, scores on the CD-RISC reflective of resilience were the mediator variable, and the indices of well-being determined by scores on the RSPWB were the outcome variables. By using six mediation models rather than one overall model, specificity regarding the mediating effects of resilience between negative life

events and the six distinct indices of well-being is provided. According to Ryff (1989), while the six dimensions of well-being appear inter-related, they may also be rooted in unique psychosocial, interpersonal, and cultural dynamics. Thus, it is important to examine each index of well-being as an outcome variable in the proposed models rather than collapsing the dimensions into one total well-being construct. In the models analyzed, 10,000 bootstrap samples were analyzed. Determination of significant effects was estimated by 99% bias corrected confidence intervals. Essentially, mediated effects are thought to exist if zero values do not exist between the lower and upper bound range of the confidence intervals.

CHAPTER 4: RESULTS

Mean Comparisons

A multivariate analysis of variance (MANOVA) was performed to assess mean differences among self-reported accounts of resilience, negative life events, positive relations with others, autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance. Mean differences were compared according to rural status, grouping variables derived from participant identification with either rural upbringing or non-rural upbringing. Results revealed a non-significant multivariate effect, $\lambda = .98$, $F(8, 314) = .91$, $p = ns$, $\eta^2 = .02$). These results indicate that individuals with rural upbringings report comparable levels of resilience, negative life events, positive relations with others, autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance to individuals with non-rural upbringings. Means, standard deviations, and minimum and maximum scores for each variable are located in Table 1.

Bivariate Correlations

Bivariate correlations were analyzed to examine existing relationships among the study's variables. As expected, negative life events were inversely and directly related to all six indices of well-being ($r = -.23$ to $-.52$). Consistent with expectations, resilience was negatively related to negative life events ($r = -.29$) and positively related to all indices of well-being ($r = .37$ to $.59$). Overall, all variables were significantly related in the expected direction and to the expected degree. Means, standard deviations, and inter-correlations among the study's variables are located in Table 2.

Mediation Modeling

Six mediation models were analyzed in this study, examining the relationships between negative life events and each of the six indices of psychological well-being. The first mediation model examined the indirect effect of resilience on the relationship between negative life events and positive relations with others. The second mediation model examined the indirect effect of resilience on the relationship between negative life events and autonomy. The third mediation model examined the indirect effect of resilience on the relationship between negative life events and environmental mastery. The fourth mediation model examined the indirect effect of resilience on the relationship between negative life events and personal growth. The fifth mediation model examined the indirect effect of resilience on the relationship between negative life events and purpose in life. Finally, the sixth mediation model examined the indirect effect of resilience on the relationship between negative life events and self-acceptance. Depictions of all mediation models are included in Figure 1.

All models were analyzed using Preacher and Hayes' (2004) mediation approach. Again, Preacher and Hayes' (2004) mediation approach is a non-parametric, bootstrapping technique that offers more statistically powerful and accurate results when compared against traditional approaches to mediation modeling. Significant indirect effects (mediated effects; significant at the .01 level) exist when the lower and upper bounds for the 99% bias corrected confidence intervals do not contain zero.

In the first model, the unstandardized point estimate of the indirect effect was -.04, 99% CI = -.08 to -.02, $\kappa^2 = .11$. The confidence interval excluded zero, indicating a moderate indirect effect. The direct effect between negative life events and positive relations with others remained significant, $t = -5.78$, $p < .01$, even after accounting for the indirect effect of resilience, indicating

partial mediation. In the second model, the unstandardized point estimate of the indirect effect was $-.04$, 99% CI = $-.08$ to $-.02$, $\kappa^2 = .09$, also indicating a moderate indirect effect. The direct effect between negative life events and autonomy remained significant, $t = -4.16$, $p < .01$, even after accounting for the indirect effect of resilience, indicating partial mediation. In the third model, the unstandardized point estimate of the indirect effect was $-.05$, 99% CI = $-.08$ to $-.02$, $\kappa^2 = .12$, indicating a moderate indirect effect. The direct effect between negative life events and environmental mastery remained significant, $t = -8.93$, $p < .01$, even after accounting for the indirect effect of resilience, indicating partial mediation of the relationship. In the fourth model, the unstandardized point estimate of the indirect effect was $-.05$, 99% CI = $-.08$ to $-.02$, $\kappa^2 = .11$. The confidence interval excluded zero, indicating a moderate indirect effect. After accounting for the indirect effect of resilience, the direct effect between negative life events and personal growth remained significant, $t = -4.16$, $p < .05$, indicating partial mediation. In the fifth model, the unstandardized point estimate of the indirect effect was $-.06$, 99% CI = $-.10$ to $-.03$, $\kappa^2 = .13$, indicating a moderate indirect effect. The direct effect between negative life events and purpose in life remained significant, $t = -4.10$, $p < .01$, even after accounting for the indirect effect of resilience, indicating partial mediation. In the sixth model, the unstandardized point estimate of the indirect effect was $-.08$, 99% CI = $-.13$ to $-.03$, $\kappa^2 = .14$, indicating a moderate indirect effect. The direct effect between negative life events and self-acceptance remained significant, $t = -7.32$, $p < .01$, even after accounting for the indirect effect of resilience, indicating partial mediation of the relationship.

CHAPTER 5: DISCUSSION

Outline of Purpose

The overarching goal of the current study was to examine how emerging adults generate pathways to psychological well-being. Given this goal, the current study sought to answer the following questions: (a) do self-reports of the study's variables differ by rurality (rural vs. non-rural), (b) do inverse relationships exist between self-reports of negative life events and indices of well-being, (c) do positive relationships exist between self-reports of resilience and indices of well-being, and (d) does resilience mediate relationships between negative life events and indices of well-being?

Rural Differences

A multivariate analysis of variance (MANOVA) examined rurality differences on reports of negative life events, resilience, and the six indices of psychological well-being. Non-significant differences were revealed. These results suggest that individuals from rural areas report similar levels of negative life events, resilience, and well-being when compared to individuals from non-rural areas. This finding is inconsistent with existing literature suggesting that rural individuals typically report higher levels of stressors (Smith, Humphreys, & Wilson, 2008) and lower positive psychological resources (Kelly et al., 2011) when compared to individuals from non-rural areas.

Inconsistencies regarding rurality differences may be related to the distinctive sample of individuals who participated in the current study. By recruiting college students as participants, rurality differences among individuals may have been diluted. Specifically, college provides unique levels of health-oriented resources, social and educational opportunities, and exposure to diverse experiences that may not be readily available for individuals residing in a rural or remote

location. As a result, the university setting may alter how students from rural areas utilize health resources and experience social support in ways that promote higher levels of resilience and well-being and lower levels of negative life experiences. Moving forward, future studies may benefit from gathering data from emerging adults outside of the college environment to better assess potential differences between rural and non-rural individuals on reports of negative life events, resilience, and well-being.

Bivariate Relationships

Negative Life Events and Well-Being. Bivariate correlations were analyzed to determine relationships between negative life events and well-being. As expected, results revealed significant inverse relationships between negative life events and each of the six indices of well-being. These results suggest that individuals who report fewer negative life experiences are more likely to express higher estimates of psychological well-being. These results are consistent with previous research findings highlighting negative life events as an important predictor of decrements in well-being and life satisfaction (Shonkoff et al., 2012).

Considering these findings, it is important that future research clarify if distinctive types of negative life events differentially predict decrements in well-being among emerging adults. For instance, such varied negative life events as experiencing a natural disaster, death of a loved one, and ending of a romantic relationship may have a differential effect in predicting decrements in well-being. In the future, research may need to assess for multiple negative life event experiences and differentially examine how such experiences influence decrements in well-being.

In addition, it is important to understand how emerging adults increase well-being despite being tested by adversity. According to Martin and Martin (2002), 50% of individuals who

experience negative life events do not report decrements in psychological well-being. This suggests that the overarching relationship between negative life events and well-being is dependent upon a third construct. For instance, social support may be a construct that affects the nature of the relationship between these variables. Social support may be related to lower perceived threat of negative events (Cohen & Wills, 1985) or possibly related to increased self-esteem often associated with social connectedness (Thoits, 2011). Future research should examine the moderating role of social support to better understand conditions by which negative life events are related to well-being.

Resilience and Well-Being. Bivariate correlations were analyzed to determine relationships between resilience and indices of psychological well-being. As expected, results revealed significant positive relationships between resilience and all six indices of well-being. These results are consistent with previous research findings that suggest individuals with high resilience experience less adverse reactions to negative life experiences (Ong et al., 2006) than individuals with lower levels of resilience (Hardy, Concato, & Gill, 2004). Building on these results, it is important to consider if and how resilience *promotes* well-being. This relationship will need to be examined experimentally to analyze potential pathways by which resilience leads to increases in well-being. For instance, future research should examine whether resilience facilitates higher levels of optimism, a construct that is known to foster higher levels of well-being (Karademas, 2006; Lyubomirski, Dickerhoof, Boehm, & Sheldon, 2011). By investigating the interplay between resilience and optimism, researchers may be able to offer a more defensible theory regarding the benefits of resilience in facilitating greater levels of well-being.

Mediation Modeling

Examination of the indirect effects of positive psychology variables in association with well-being is a fairly nascent field of study (Jorgensen & Nafstad, 2005; Mongrain & Anselmo-Matthews, 2012), and our study is one of the first to focus research attention specifically on the relationship between these variables in the context of negative life events. Our results show that resilience is useful in explaining how negative life events are related to well-being and support the notion that the association between negative life events and well-being is complex and may be best explained through mediating variables (Martin & Martin, 2002).

Our results highlight a significant indirect pathway by which higher levels of negative life events are associated with lower levels of well-being. However, it is important to note that the identified indirect pathway was analyzed through a cross-sectional and correlational design, which inhibits causal interpretations and insights regarding temporal precedence. Despite these limitations, the findings do offer some preliminary evidence to guide future research. For instance, our results suggest that emerging adults may have difficulty marshalling resilience resources in the face of adversity, which, in turn, may increase the rates by which these emerging adults experience low levels of well-being. Alternatively, these results suggest that if emerging adults can marshal resilience resources in the face of impinging adversity, they may be able to maintain higher levels of well-being. This position is in line with positive psychological theory which emphasizes the importance of examining how positive psychological variables (e.g., resilience, positive affect, interpersonal connectedness) may serve to preserve and promote mental health and positive psychological outcomes (Seligman, & Csikszentmihalyi, 2000). However, these implications are mere speculation guided by the study's cross-sectional and correlational findings. It is important for research to employ experimental and longitudinal

designs to determine if and how resilience impacts one's experience of adversity in the prediction of well-being scores.

Furthermore, resilience was found to be a partial mediator, suggesting there are additional variables with the potential to explain the association between negative life events and psychological well-being. For example, Thoits (2011) posited that mattering, referring to one's role-based purpose, may serve as a "stress-buffer" to well-being. Considering this, future research may extend our research by examining the interplay of resilience and other positive psychological variables such as mattering within the context of the negative life events and well-being relationship.

Practical Implications

The results of our study provide multiple practical implications for assessing and improving psychological well-being among emerging adults. Our findings reveal that negative life events are related to lower accounts of well-being, suggesting that assessment of such adverse experiences may be helpful in predicting individuals at risk for experiencing psychological distress. Additionally, our results highlight a positive relationship between resilience and well-being. As a result, evaluating one's resiliency resources and traits may be a good indicator of emotional distress as well. Overall, the use of clinical interviews as well as the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) and the Inventory of College Students' Recent Life Experiences (ICSRLE; Kohn, et al., 1990) may help mental health practitioners identify emerging adults at risk for a number of debilitating mental health outcomes. Mental health practitioners should give consideration for these measures as a viable means to track progress in a therapeutic context.

Despite best efforts, prevention of negative life events is often extremely difficult as life commonly presents individuals with uncontrollable and challenging circumstances. Our results suggest that individuals with lower accounts of resilience may be more vulnerable to experience decrements in well-being following stressful events, highlighting a need for treatment approaches that focus on increasing resilience in effort to promote well-being. Specifically, resilience building programs such as the Penn Resiliency Program and Comprehensive Soldier and Family Fitness may be appropriate means for helping emerging adults overcome adversity and reinforcing higher levels of well-being (Harms, Krasikova, Vanhove, Herian, & Lester, 2013; Reivich, Seligman, & McBride, 2011). Programs such as these promote development of psychological strengths such as optimism and adaptability in effort to increase resiliency and decrease the occurrence of negative psychological outcomes commonly associated with traumatic or otherwise stressful experiences. By focusing intervention strategies on resilience, mental health practitioners may increase the frequency by which emerging adults employ healthy coping efforts and enhance feelings of efficacy regarding coping as a means to maintain and enhance well-being.

Limitations

The current study has a number of limitations worth noting. First, the sample from which data were collected may limit external validity of the findings. The sample may present a skewed view of college students, as the participants within the current study primarily self-identified as White, heterosexual individuals of a traditional college age. As a consequence, results cannot be generalized to more diverse student populations, including ethnically diverse, sexual minority and non-traditional college students. Future research should re-examine the current study's questions with a more diverse sample of college students. Second, given the self-survey nature of

the study, participants' responses may be overly-influenced by social desirability, incorrect recollection, and other demand characteristics that may result in inaccurate reporting. Future studies will benefit from utilizing more objective and behavioral assessments to analyze the current study's questions as a means to increase the accuracy of the results. Third, the correlational design of the study confines our ability to infer causation between variables. In order to determine if negative life events cause fluctuations in well-being scores, future research will need to consider these relationships experimentally. Finally, the cross-sectional nature of the current study limits our ability to interpret the models from a causal perspective. Assessing all variables simultaneously prevents us from identifying any changes that may occur over time. Future studies will require models to be examined through a longitudinal design, which will aid in determining causality and ruling out alternative explanations of the observed findings. A longitudinal design that may be used is an autoregressive model that estimates fluctuations in variable scores across three waves (MacKinnon, 2008). Such a design allows researchers to examine antecedent effects, which would increase the accuracy, stability, and confidence of the proposed models.

General Conclusions

In summary, the current study confirmed that negative life events were inversely associated with reports of psychological well-being among emerging adult samples. Additionally, resilience was identified as a partial mediator of the link between negative life events and each of the indices of well-being (i.e., Self-Acceptance, Positive Relations with Others, Autonomy, Environmental Mastery, Purpose in Life, and Personal Growth). These findings offer a theoretically insightful pathway by which negative life events are related to well-being. These findings also generate some unique clinical implications. For instance, an important

goal for mental health practitioners who treat individuals with long and detailed histories of experiencing adversity is to employ resilience-based programs and strategies during the course of therapy. Overall, resilience-based programs may aid clients in coping efforts, which in turn should improve well-being.

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Table 1.

Means, Standard Deviations, and Minimum and Maximum Scores for Resilience, Negative Life Events, and Well-Being Dimensions in Rural and Non-Rural Students

Variables (N)	Mean (SD)	Min-Max Scores
Rural Participants		
Resilience (N = 135)	95.38 (13.93)	61.00-125.00
Negative Life Events (N = 135)	99.24 (23.65)	49.00-181.00
Self-Acceptance (N = 135)	55.71 (14.02)	20.00-80.00
Positive Relations with Others (N = 135)	57.73 (9.94)	29.00-80.00
Autonomy (N = 135)	55.90 (11.07)	18.00-82.00
Environmental Mastery (N = 135)	53.50 (10.57)	22.00-74.00
Purpose in Life (N = 135)	59.19 (11.15)	35.00-84.00
Personal Growth (N = 135)	62.11 (9.49)	43.00-82.00
Non-Rural Participants		
Resilience (N = 188)	93.78 (11.65)	48.00-121.00
Negative Life Events (N = 188)	99.93 (22.64)	49.00-191.00
Self-Acceptance (N = 188)	57.04 (10.97)	26.00-84.00
Positive Relations with Others (N = 188)	58.69 (8.74)	36.00-79.00
Autonomy (N = 188)	57.42 (9.56)	38.00-84.00
Environmental Mastery (N = 188)	53.97 (8.35)	29.00-84.00
Purpose in Life (N = 188)	59.99 (10.27)	36.00-84.00
Personal Growth (N = 188)	63.13 (9.41)	40.00-82.00

Table 2.

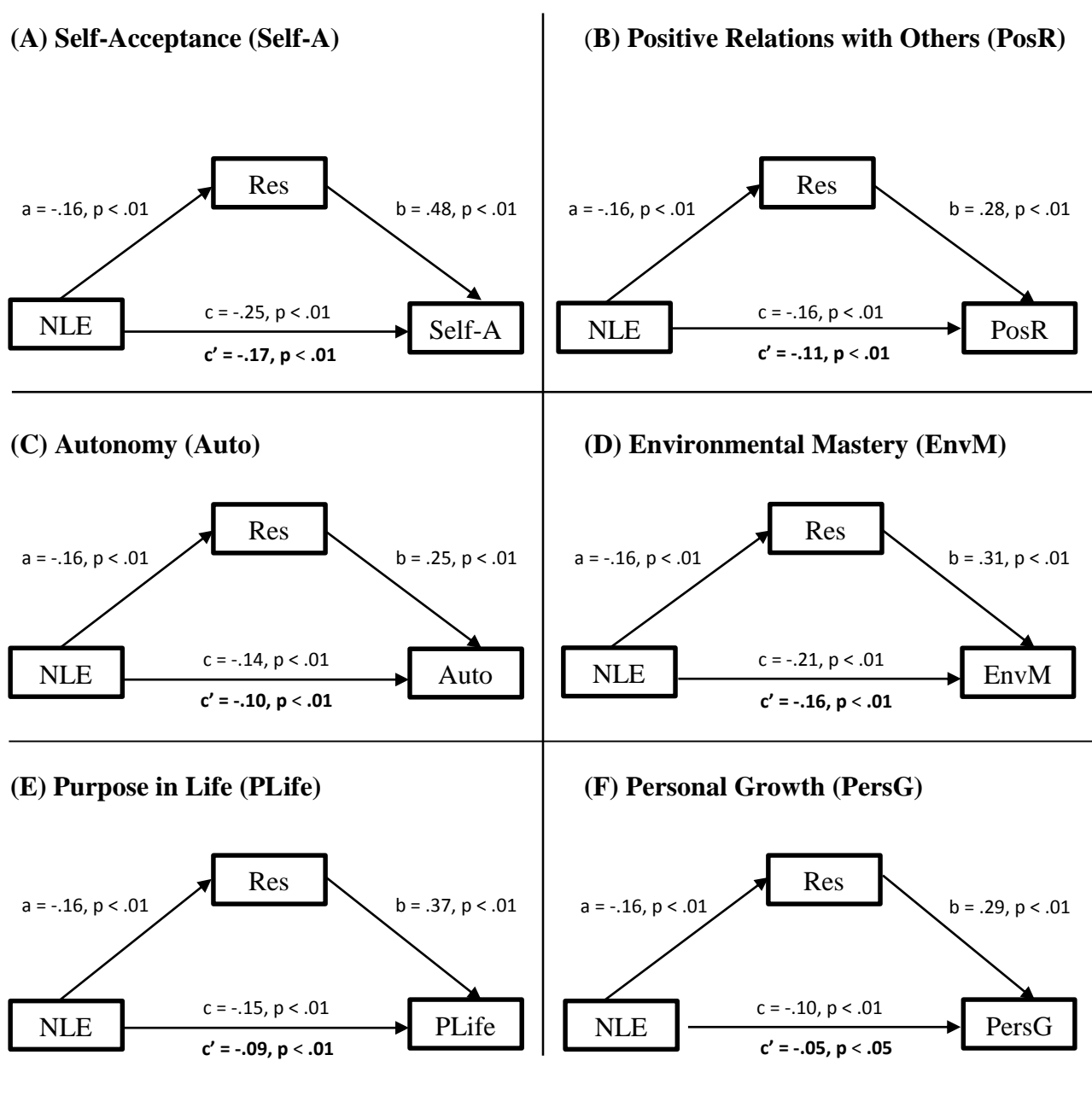
Means, Standard Deviations and Inter-Correlations among the Study's Variables

Variables	1	2	3	4	5	6	7	8
	Res	NLE	Self-A	PosR	Auto	EnvM	PLife	PersG
1. Res		-.29**	.59**	.46**	.38**	.53**	.50**	.42**
2. NLE			-.46**	-.39**	-.31**	-.52**	-.33**	-.23**
3. Self-A				.72**	.59**	.74**	.77**	.60**
4. PosR					.48**	.62**	.67**	.60**
5. Auto						.44**	.50**	.56**
6. EnvM							.65**	.42**
7. PLife								.71**
8. PersG								
Mean	99.65	99.65	56.49	58.28	56.77	53.80	59.64	62.68
SD	12.65	22.96	12.32	9.25	10.22	9.33	10.64	9.45

** = Correlation is significant at the 0.01 level (2-tailed).

Legend: Res= Resilience; NLE = Negative Life Events; Self-A = Self-Acceptance index; PosR = Positive Relations with Others index; Auto = Autonomy index; EnvM = Environmental Mastery index; PLife = Purpose in Life index; PersG = Personal Growth index

Figure 1. *Direct and Indirect Pathways between Negative Life Events and Well-Being Dimensions*



Legend: Res= Resilience; NLE = Negative Life Events; Self-A = Self-Acceptance index; PosR = Positive Relations with Others index; Auto = Autonomy index; EnvM = Environmental Mastery index; PLife = Purpose in Life index; PersG = Personal Growth index