

Georgia Southern University

Georgia Southern Commons

Association of Marketing Theory and Practice
Proceedings 2016

Association of Marketing Theory and Practice
Proceedings

2016

Flirting Online and the Connection between the Use of Dating Websites and Dating Applications

Kristine Johnson
Rowan University

Olguta Vilceanu
Rowan University

Manuel C. Pontes
Rowan University

Follow this and additional works at: https://digitalcommons.georgiasouthern.edu/amtp-proceedings_2016



Part of the [Marketing Commons](#)

Recommended Citation

Johnson, Kristine; Vilceanu, Olguta; and Pontes, Manuel C., "Flirting Online and the Connection between the Use of Dating Websites and Dating Applications" (2016). *Association of Marketing Theory and Practice Proceedings 2016*. 5.

https://digitalcommons.georgiasouthern.edu/amtp-proceedings_2016/5

This conference proceeding is brought to you for free and open access by the Association of Marketing Theory and Practice Proceedings at Georgia Southern Commons. It has been accepted for inclusion in Association of Marketing Theory and Practice Proceedings 2016 by an authorized administrator of Georgia Southern Commons. For more information, please contact digitalcommons@georgiasouthern.edu.

Flirting Online and the Connection between the Use of Dating Websites and Dating Applications

Kristine Johnson

Rowan University

Olguta Vilceanu

Rowan University

Manuel C. Pontes

Rowan University

ABSTRACT

For this research, we used data collected by the Pew Foundation's "Internet and American Life Project Tracking Survey," conducted in Spring 2013. The data was adjusted through the use of sampling weights to estimate for general population parameters. The collected data examined online flirting, use of dating websites, and the use of dating apps. Findings suggest women between the ages of 18-34 years are just as likely as men to signal their romantic interest by engaging in online flirtation. In addition, women ages 50 years or older are less likely than men to signal their romantic interest by engaging in online flirtation. Also, adults ages 50 years or more who flirt online are more likely to use an online dating website or app. Findings concerning Generation X are also discussed. Marketing implications include a concentration on "flirting-focused" options, especially in relation to free trials, promotional offers, and marketing tactics for digital dating services. Strategies for appealing to the Baby Boomer market may involve a focus on active lifestyles and geographic marketing. Marketing to Millennials may need to be increasingly strategic given the equal amount of online flirting among males on females.

INTRODUCTION

The popularity of online dating—an Internet service designed to facilitate romantic connections between individuals—has increased substantially since its inception. What was once viewed as a social stigma is now widely accepted to be a “good way to meet people” (Smith and Anderson, 2014, para. 3). In fact, research indicates 87 percent of single American males and 83 percent of single American females view online dating as socially acceptable (Statistics and Facts, 2015).

The growth in online dating is due in part on the advancement and adoption of new technologies, as well as the number of available options. For instance, the mobile-only application, Tinder—an app that provides search results based on location—continues to be immensely popular (Bilton, 2014), while longer-standing, more traditional online dating sites such as Match.com and eHarmony are still very well utilized (Match Group, 2015; Harwell, 2015). Today, more than

ever, there are a plethora of specialized digital dating resources: Grinder for Her, designed specifically for the lesbian population; Gluten-free Singles, a dating sites for health-conscience people, and Ashley Madison, a outlet for those who want to have an extramarital affair. The growing emphasis on specialization is clearly evident, as over 500 dating-related applications can be found at the iTunes store (Wells, 2015).

Yet despite the variation of options, there remains a need to investigate the use of dating websites and applications on a larger scale—meaning as it applies to the general population—specifically when it comes to demographics and behavior. Thus, the purpose this study research is to examine the relationship between multiple independent variables (demographic and behavioral variables) and the likelihood of online flirtation on the use of a dating website or app. By identifying this information, insight from this study may serve as a valuable basis for the varying marketing tactics and as basis for further exploration of consumer use of varying dating websites and applications.

LITERATURE REVIEW

Previous research on online dating includes both in-depth qualitative and extensive quantitative investigations of differences in: attitudes, goals, and preferences of adults who engage in online dating (Alterovitz & Mendelsohn 2009; Cali et al. 2013); the process of selecting and pursuing potential partners for romantic relationships (Blackhart et al. 2014; Finkel et al 2012; Heino, Ellison & Gibbs 2010); and the conceptualizing and analyzing self and others' presentation strategies (Couch & Liamputtong 2012; Geser 2007; Guadagno & Sagarin 2010; Hall et al 2010; Lo, Hsieh & Chu 2013). These studies focused on comparing concept and strategies associated with online vs. offline dating, with participants selected primarily from among Caucasian, white, heterosexual, and younger females.

AGE AND ONLINE DATING

Among a handful of studies focused on online dating expectations and experiences of older adults, participants tended to consist of predominantly Caucasian females and small percentages of Caucasian males (McWilliams & Barrett 2014; Norton & Baptist 2014; Smith, Rogers & Brady 2003; and Wada, Clarke & Rozanova 2015). These studies devoted substantial attention to the issue of conceptualizing relationships, romance, and relevance of online dating without necessarily positioning it as separate from 'real life'—rather, as a precursor to real-life interactions. In-depth interviews with older adults tend to bring up deeper issues related to online dating, such as the ways couples negotiate acceptable boundaries related to trust/openness and emotional fidelity in their management of internet social networking boundaries (Norton & Baptist 2014) and maximize social networking capital across multiple technological platforms (Smith, Rogers & Brady 2003). In addition, older adults see online dating as a way to expand the pool of potential partners for offline relationships when their status as older adults presents complications for using the immediate or traditional environments (family, friends, church, bars, or workplace) to identify romantic partners (McWilliams & Barrett 2014; Norton & Baptist 2014; Smith, Rogers & Brady 2003; and Wada, Clarke & Rozanova 2015).

Specifically within populations of older adults, there appears to be tremendous pressure to define online dating based on information from online dating sites such as eHarmony.com and Match.com, promoting the idea of online dating as prevalent for adults over 50 seeking marital partners (Gonzaga 2010; McWilliams & Barrett 2014). In-depth interviews with online dating volunteers reach within the choir and pull out evidence of substantial differences between heterosexual men and women (Norton & Baptist 2014; Smith, Rogers & Brady 2003). While both genders are looking for romance/companionship/sexual relationships, it appears that males who were married or in stable relationships before mostly *seek* similar gender roles (supportive, caring, active, and younger female partners for their ‘psychologically young’ self). In contrast, older women seek dating partners who are actually their age or younger, in an attempt to *avoid* falling into the roles of supportive and caring wives of aging or older men (McWilliams & Barret 2014).

Studies where the majority of participants consisted of young adults focused on the superficial aspects of online dating (objectification of potential partners and commodification of online dating values). Research suggests younger consumers prefer the next generation of online dating services, or rather dating apps. This is abundantly clear as over half of those who use Tinder—a mobile-only dating technology—are between the ages of 18-24. Accordingly, there is a call to effectively market to this demographic given this group is used to getting services such as these for free (Comscore, 2014). These younger individuals are also connecting with romantic partners through the use of texting and sexting (the process of texting sexually explicit messages or photographs). These users, at times, bypass online dating services to instead focus on SMS correspondence. In these instances, those who are less attached to one another are more likely to send sexually explicitly messages, while those with higher levels of attachment, are more likely to merely text one another (Drouin & Landgraff, 2012).

USES AND GRATIFICATIONS

The theoretical perspective used for this research, The Uses and Gratifications Approach (UGA), is designed to further identify reasons why people use media and the gratifications received from their experience. The perspective focuses on active media consumption (Wimmer & Dominick, 2013) and serves to further understand implications associated the use of varying media. Past research includes consumption of television (Schramm, Lyle and Parker, 1961); the use of VCRs (Rubin and Bantz, 1987); cable television Heeter and Greenberg (1985); consumer consumption of the Internet (Ruggiero, 2000); student use of MP3 players (Ferguson, Greer, & Reardon, 2008); texting and social media (Kwak. 2012), and consumer reliance on online social networks for gay men (Gudelunas, 2012).

PRINCIPAL GOALS OF RESEARCH and RESEARCH QUESTION

Previous research has used univariate analyses to examine the relationship between individual demographic variables and the likelihood of online flirtation or of using a dating website or app (Smith & Duggan, 2013). The purpose of the present research is to use multivariate analyses to examine the relationship between multiple independent variables (demographic and behavioral

variables) and the likelihood of online flirtation or of using a dating website or app. Previous research has shown that men are significantly more likely to flirt online than women and that there is a significant negative relationship between age and online flirtation (Smith & Duggan, 2013). This research is primarily designed to examine whether the gender effect is invariant across age groups or whether the effect of gender is greater among older adults than among younger adults. It is plausible that among younger adults (18-34 years), women may be just as likely as men to signal their romantic interest by engaging on online flirtation. Thus, the first research question is as follows:

RQ1: Are women between the ages of 18-34 years just as likely as men to signal their romantic interest by engaging in online flirtation?

In contrast, among older adults (50 years or older) women may be less likely to signal their romantic interest by engaging in online flirtation. Thus, the second research question is as follows:

RQ2: Are women ages 50 years or older less likely to signal their romantic interest by engaging in online flirtation?

In addition, this research looks at the relationship between online flirtation and the use of a dating website or app. Previous research has shown that younger adults (18-34 years) are more likely to live their social lives online and so they may be more likely to flirt online with individuals that they know offline. (Example: college students flirting with other persons in their classes). In this case, only a small minority of young adults who flirt online also use a dating website or app. In contrast, older adults (50 years or more) are less likely to live their social lives online, and so they may be less likely to flirt online with individuals they know offline; rather they may restrict online flirtation to persons they meet at a dating website or app. In this case, a much larger percentage of older adults who flirt online would also have used a dating website or app. The relationship between these two behavioral variables, 1) online flirtation and 2) use of a dating website has not been investigated previously. Thus, the finally research question is as follows:

RQ3: Do adults ages 50 years or more who flirt online more likely to use online a dating website or app?

METHODS

DATA SOURCE AND SUBJECTS

For this research, we used data collected by the Pew Foundation's "Internet and American Life Project Tracking Survey" conducted in Spring 2013 (Smith & Duggan, 2013). The data were obtained from telephone interviews with a nationally representative sample of adults (ages 18 or older) living in the continental US (n=2,252). Approximately equal numbers of interviews were conducted by landline (n=1,125) and cellphone (n=1,127). Slightly more than half of cell-phone interviewees (n=571) did not have landline access. Interviews were conducted in English (n=2165) or Spanish (n=87) between April 17 and May 19, 2013 by Princeton Survey Research

Associates International (PSRAI) (Smith & Duggan, 2013). Sampling weights were calculated to correct for demographic differences between the obtained sample and the US population and were provided in the dataset, which was downloaded from the Pew Foundation website (Smith & Duggan, 2013). It is necessary to incorporate these sampling weights for the estimation of population parameters (Lumley, 2014).

VARIABLES

Dependent Variables. The two dependent variables that are the primary focus of this study are whether the respondent 1) Ever flirted with someone online and 2) Ever used an online dating site or mobile dating app. Separate questions were asked about whether respondents a) Ever used an online dating site, and, b) Ever used a mobile dating app. Respondents, who answered – yes - to either question, were coded as having ever used a dating website or app.

Independent Variables. The four independent variables of primary interest for this study are 1) Age, 2) Income, 3) Education, and 4) Gender. Previous univariate analyses with these data have shown that age has a significant negative relationship with the likelihood of online flirting or of the use of an online dating site (Smith & Duggan, 2013). Previous research has also shown that women are significantly less likely than men to flirt with someone online, and adults with at least some college education are significantly more likely to use an online dating site (Smith & Duggan, 2013). The purpose of this research is to perform multivariate logistic to examine the separate effects of the independent variables on each of the dependent variables.

STATISTICAL ANALYSES

Since the Pew survey data have sampling weights, specialized software are needed to incorporate the sampling weights for estimation of population parameters. The estimates in this paper were produced using R (R Core Team, 2014) and the survey package for R (Lumley, 2004, 2014)). The survey package uses the method of Taylor series linearization to estimate t-statistics, standard errors, and significance levels (Lumley, 2004)). Estimated percentages are reliable if the standard error is less than 30% of the estimate (Cominole, Riccobono, Siegel, & Caves, 2012). Standard errors of all the reported estimated percentages met this criterion.

The results of univariate and multivariate analyses are reported in this paper. The statistical significance of each univariate two-group difference was estimated by t-statistics as described (National Center for Education Statistics, 2014). Multivariate analyses were performed by the use of two logistic regression models. For the first logistic regression model, the dependent variable was whether the respondent ever flirted online (Yes, No; reference group=No). The independent variables were respondent's 1) sex (men, women), 2) age level (18-34, 35-49, and 50+ years), 3) household income level (\$0-49,000, \$50+ thousand), and 4) education level (no college, at least some college). For the second logistic regression model, the dependent variable was whether the respondent ever used a dating website or app (Yes, No; reference group=No). The independent variables used for this logistic regression model were the 4 independent variables listed above plus an additional variable, whether the respondent ever flirted online (Yes, No). Each model was estimated separately on 1) all adults and 2) online adults (online

adults are defined as those who had used the Internet or email on any device – including a cell phone or a mobile device). Note: the initial models contained all the 4 (5) independent variables listed previously. If the estimates for any independent variables were non-significant, they were deleted, the reduced model reanalyzed, and results reported.

RESULTS

EVER FLIRTED ONLINE: UNIVARIATE ANALYSES

US Adults. As displayed in, 20.4% of all US adults have flirted online. Among all US adults, univariate analyses showed the likelihood of online flirtation was significantly lower among women (17.9%) than among men (23.1%), $t=-2.62$, $p<0.01$. There were also significant effects of age. Online flirtation was significantly lower among persons 50+ years (6.7%), $t=-14.66$, $p<0.01$, or among persons 35-49 years (20.4%) $t=-7.19$, $p<0.01$, than among persons 18-34 years (42.4%). Also, adults with some college education (24.3%) were significantly more likely than adults with no college education (15.6%) to have flirted online, $t=4.39$, $p<0.01$. There was no significant effect of income; the likelihood of online flirtation was not significantly lower among adults with annual household income \$50+K (21.2%) than among adults with annual household income less than 50K (23.2%), $t=-0.88$, $p>0.25$.

Table 1
Percentage of US Adults Who Have Flirted Online

Group		All US Adults		Online US Adults	
		% (SE)	t	% (SE)	t
All Adults		20.4 (1.0)		24.1 (1.1)	
Gender	Women	17.9 (1.3)**	- 2.62	21.2 (1.5)**	- 2.60
	Men	23.1 (1.5)		27.1 (1.7)	
Age	50 years or older	6.7 (0.8)**	- 14.66	9.2 (1.1)**	- 13.11
	35-49 years	20.0 (2.1)**	- 7.19	21.7 (2.2)**	- 5.08
	18-34 years	42.4 (2.3)		43.8 (2.4)	
Education	At least some college	24.3 (1.4)**	4.39	26.0 (1.5)*	2.09
	No college	15.6 (1.4)		21.1 (1.8)	
Income	50K or more	21.2 (1.6)	- 0.88	22.2 (1.7)**	- 2.63
	0 – 49K	23.2 (1.6)		28.9 (1.9)	

Online US adults=US adults who have used the Internet or checked email, % = percentage of US adults within group who have flirted online, SE=Standard error of estimate, t=t statistic, significance levels: *= $p<0.05$, **= $p<0.01$

Results displayed in Table 2 show the percentage of US adults who have flirted online by age group and gender. Among adults 50 or older, online flirtation was significantly less likely among women (4.2%) than among men (9.5%), $t=-3.21$, $p<0.01$. There was no significant effect of gender among adults 35-49 years or among adults 18-34 years (all p-values > 0.10).

Online US Adults. Results, displayed in Table 1, show that 24.1% of all online US adults have flirted online. (Online US adults=US adults who have used the Internet or checked email). Among online US adults, univariate analyses showed the likelihood of online flirtation was significantly lower among women (21.2%) than among men (27.1%), $t=-2.60$, $p<0.01$. Online flirtation was significantly lower among online persons 50+ years (9.2%), $t=-13.11$, or among persons 35-49 years (21.7%), $t=-5.08$, $p<0.01$, than among persons 18-34 years (43.8%). Also, adults with some college education (26.0%) were significantly more likely than adults with no college education (15.6%) to have flirted online, $t=2.09$, $p<0.05$. There was a significant negative effect of income; the likelihood of online flirtation was significantly lower among adults with annual household income \$50+K (22.2%) than among adults with annual household income less than 50K (28.9%), $t=-2.63$, $p<0.01$.

Results displayed in Table 2 show the percentage of online US adults who have flirted online by age group and gender. Among adults 50 or older, online flirtation was significantly less likely among women (5.7%) than among men (13.2%), $t=-3.22$, $p<0.01$. There was no significant effect of gender among adults 35-49 years or among adults 18-34 years (all p -values > 0.10).

Table 2
Percentage of US Adults Who Have Flirted Online by Age and Gender

Table 2: Percentage of US Adults Who Have Flirted Online by Age and Gender

Age	All US Adults			Online US Adults		
	Men (Ref) % (SE)	Women % (SE)	t	Men (Ref) % (SE)	Women % (SE)	t
50 years or older	9.5 (1.5)	4.2 (0.9)**	- 3.12	13.2 (2.0)	5.7 (1.2)**	- 3.22
35 – 49 years	22.7 (3.1)	17.4 (2.7)	- 1.29	24.6 (3.3)	19.0 (2.9)	- 1.50
18 – 34 years	42.3 (3.2)	42.5 (3.4)	0.04	43.5 (3.2)	44.1 (3.5)	0.13

Online US adults=US adults who have used the Internet or checked email, % = percentage of US adults within age group and gender who have flirted online, SE=Standard error of estimate, t=t statistic for comparison between men and women, significance levels: *= $p<0.05$. **= $p<0.01$

EVER FLIRTED ONLINE: MULTIVARIATE ANALYSES

Results of multivariate logistic regression with the All US Adults sample, displayed in Table 3, show that there was no significant effect of gender ($\beta = -0.00$, $t = -0.02$, $p>0.50$). There were significant effects of age. Compared to adults 18-34 years, likelihood of online flirtation was significantly less among adults 50+ years ($\beta = -1.95$, $t=-8.93$, $p<0.01$) or among adults 35-49 years ($\beta = -0.91$, $t = -4.06$, $p<0.01$). There was also a significant age x gender interaction on the likelihood of online flirtation. Among adults 50 years or older, men were significantly more likely than women to flirt online ($\beta = -0.87$, $t = -2.55$, $p<0.05$). Among adults 35-49 years, men were not significantly more likely than women to flirt online ($\beta = -0.40$, $t = -1.23$, $p>0.20$). Also, adults with some college education were significantly more likely to flirt online than adults with no college education ($\beta = 0.59$, $t = 4.13$, $p<0.01$). There was no significant effect of household income (Result not reported). Similar results were obtained with the Online US Adults sample.

Table 3: Logistic Regression: Percentage of US Adults Who Have Flirted Online

		All US Adults		Online US Adults	
		β (SE)	t	β (SE)	t
Gender	Women	- 0.00 (0.2)	- 0.02	0.01 (0.20)	0.07
	Men (Ref)				
Age	50 years or older	- 1.95 (0.22)	- 8.93**	- 1.66 (0.22)	- 7.44**
	35 – 49 years	- 0.91 (0.22)	- 4.06**	- 0.86 (0.22)	- 3.83**
	18 – 34 years (Ref)				
Age x Gender Interaction	Women: 50 years or older	- 0.87 (0.34)	- 2.55*	- 0.92 (0.35)	- 2.67**
	Women: 35 – 49 years	- 0.40 (0.33)	- 1.23	- 0.40 (0.33)	- 1.22
Education	Men: (within age group) (Ref)				
	Some College	0.59 (0.14)	4.13**	0.40 (0.15)	2.73**
	No College (Ref)				

Online US adults=US adults who have used the Internet or checked email, β = logistic regression coefficient, SE=standard error, t=t statistic, significance: *= $p < 0.05$, **= $p < 0.01$.

Note: The Income Effect was non-significant and was deleted from reported model

EVER USED DATING WEBSITE OR APP: UNIVARIATE ANALYSES

US Adults. As displayed in Table 4, 10.8% of all US adults have used a dating website or app. Univariate analyses showed the likelihood of use of dating website or app was significantly lower among women (9.1%) than among men (12.7%), $p < 0.05$. There were also significant effects of age. Use of dating website or app was significantly lower among persons 50+ years (5.2%) than among persons 18-34 years (16.5%) ($p < 0.01$); there was no significant difference among persons 35-49 years (14.5%) than among persons 18-34 years (16.5%) ($p > 0.20$). Also, adults with some college education (13.6%) were significantly more likely than adults with no college education (7.4%) to have used a dating website or app, $p < 0.01$. There was no significant effect of income; the likelihood of the use of a dating website or app was not significantly lower among adults with annual household income \$50+K (11.5%) than among adults with annual household income less than 50K (11.9%), $p > 0.25$. Results displayed in Table 5 show the percentage of US adults who have flirted online by age group and gender. Within age groups, there were no significant effects of gender (all p-values > 0.05).

Online US Adults Results, displayed in Table 4, show that 12.8% of all online US adults have used a dating website or app. Among online US adults, the use of dating website or app was significantly lower among the women (10.9%) than among men (14.9%), $p < 0.05$. Dating website or app use was significantly lower among online adults 50+ years (7.2%), $p < 0.01$, and non-significantly lower among persons 35-49 years (15.8%), $p > 0.25$, than among persons 18-34 years (17.2%). Also, adults with some college education (14.6%) were significantly more likely than adults with no college education (10.1%) to have used a dating website or app, $p < 0.05$. There was a non-significant negative effect of income; the likelihood of use of dating website or app was non-significantly lower among online adults with annual household income \$50+K (12.1%) than among online adults with annual household income less than 50K (14.9%), $p > 0.10$. Results displayed in Table 5 show the percentage of online US adults who have used a dating website or app by age group and gender. Among adults, 50 years or older, there was a significant effect of gender; women (5.3%) were less likely to use a dating website or app than men (9.3%), $p < 0.04$. Within other age groups, there were no significant effects of gender (all p-values > 0.10).

Table 4: Percentage of US Adults Who Used A Dating Website/App

Group	All US Adults		Online US Adults	
	% (SE)	t	% (SE)	t
All Adults	10.8 (1.0)		12.8 (1.0)	
Gender	Women	9.1 (0.9)* - 2.40	10.9 (1.1)* - 2.25	
	Men	12.7 (1.2)	14.9 (1.4)	
Age	50 years or older	5.2 (0.7)** - 5.85	7.2 (1.0)** - 4.86	
	35-49 years	14.5 (1.8) - 0.79	15.8 (2.0) - 0.52	
	18-34 years	16.5 (1.8)	17.2 (1.8)	
Education	At least some college	13.6 (1.1)** 4.17	14.6 (1.2)* 2.44	
	No college	7.4 (1.0)	10.1 (1.4)	
Income	50K or more	11.5 (1.3) - 0.23	12.1 (1.3) - 1.41	
	0 – 49K	11.9 (1.2)	14.9 (1.5)	

Online US adults=US adults who have used the Internet or checked email, % = percentage of US adults within group who used a dating website or app, SE=Standard error of estimate, t=t statistic, significance levels: *= $p < 0.05$, **= $p < 0.01$

Table 5: Percentage of US Adults Who Used A Dating Website/App by Age and Gender

Age	All US Adults			Online US Adults		
	Men (Ref) % (SE)	Women % (SE)	t	Men (Ref) % (SE)	Women % (SE)	t
50 years or older	6.7 (1.3)	3.9 (0.7)	- 1.90	9.3 (1.7)	5.3 (1.0)*	- 2.03
35 – 49 years	15.3 (2.8)	13.8 (2.3)	- 0.41	16.9 (3.0)	15.1 (2.5)	- 0.46
18 – 34 years	19.0 (2.6)	13.9 (2.4)	- 1.44	19.6 (2.7)	14.6 (2.5)	- 1.36

Online US adults=US adults who have used the Internet or checked email, % = percentage of US adults within group who have used a dating website or app, SE=Standard error of estimate, t=t statistic for comparison between men and women, significance levels: *= $p < 0.05$, **= $p < 0.01$.

Results displayed in Table 6, indicate the percentage of adults who used a dating website or app by age group and whether they had ever flirted online. Not surprisingly, among all adults, the percentage who used a dating website or app was significantly greater among those who flirted online (34.0%) than among those who never flirted online (5.0%), $t=10.48$, $p < 0.01$. Among every age group, the use of a dating website or app was significantly greater among those who flirted online versus those who had never flirted online (all p-values < 0.01). Among those who had never flirted online, there was a negative effect of age on the use of a dating website or app. Among these persons, the use of a dating website was significantly lower among adults 50 years or older (2.4%), $t=-3.53$, $p < 0.01$, and non-significantly lower among adults 35-49 years (7.1%), $t=-0.83$, $p > 0.20$, than among adults 18-34 years (9.0%). Among those who had flirted online, there was a positive effect of age on the use of a dating website or app. Among these persons, the use of a dating website was significantly greater among adults 50 years or older (44.6%), $t=2.40$, $p < 0.05$, and among adults 35-49 years (44.5%), $t=2.61$, $p < 0.01$, than among adults 18-34 years (27.1%).

Table 6: Percentage of US Adults Who Used a Dating Website/App by Age and Online Flirtation Level

Age Group	Online Flirtation Level: Have you Ever Flirted Online?				
	No (Ref)		Yes		t (Flirt)
	% (SE)	t (Age)	% (SE)	t (Age)	
All: 18 years or older	5.0 (0.6)		34.0 (2.7)		10.48**
50 years or older	2.4 (0.5)	- 3.53**	44.6 (6.5)	2.40*	6.47**
35 – 49 years	7.1 (1.4)	- 0.83	44.5 (5.8)	2.61**	6.25**
18 – 34 years (Ref)	9.0 (1.8)		27.1 (3.3)		4.82**

% = percentage of US adults within group who have used a dating website or app, SE=Standard error of estimate, t (Age)=t statistic of a two-group comparison between age groups within online flirtation level, t (Age)=t statistic of a two-group comparison between adults who flirted online versus adults who did not flirt online within age group, significance levels: * $p < 0.05$, ** $p < 0.01$.

EVER USED DATING WEBSITE OR APP: MULTIVARIATE ANALYSES

Results of multivariate logistic regression with the All US Adults sample, displayed in Table 7, show that there was no significant effect of gender ($\beta = -0.23$, $t = -1.26$, $p > 0.10$), but a significant effect of online flirtation; adults who flirted online were significantly more likely to use a dating website or app ($\beta = 1.29$, $t = 4.66$, $p < 0.01$). There was also a significant effect of age. Compared to adults 18-34 years, use of dating website or app was significantly less among adults 50+ years ($\beta = -1.37$, $t = -4.61$, $p < 0.01$) but not significantly less among adults 35-49 years ($\beta = -0.26$, $t = -0.83$, $p > 0.20$). There was also a significant age x online flirtation interaction on the likelihood of using a dating website or app. Among adults 50 years or older, those who flirted online were significantly more likely than those who did not flirt online to use a dating website or app (adjusting for the main effects of age and of online flirtation) ($\beta = 2.07$, $t = 4.74$, $p < 0.01$). Also among adults 35-49 years, those who flirted online were significantly more likely than those who did not flirt online to use a dating website or app (adjusting for the main effects of age and of online flirtation) ($\beta = 1.06$, $t = 2.35$, $p < 0.05$). Also, adults with some college education were significantly more likely than adults with no college education to use a dating website or app ($\beta = 0.45$, $t = 2.35$, $p < 0.05$). There were no significant effects of household income or of any age x gender interaction (Results not reported). Similar results were obtained with the Online US Adults sample; the noteworthy difference is that in this sample, there was no significant effect of college education ($\beta = 0.34$, $t = 1.48$, $p > 0.10$).

Table 7: Logistic Regression: Percentage of US Adults Who Used Dating Website/App

		All US Adults		Online US Adults	
		β (SE)	t	β (SE)	t
Gender	Women	- 0.23 (0.17)	- 1.26	- 0.22 (0.18)	- 1.24
	Men (Ref)				
Online Flirtation	Yes	1.29 (0.28)	4.66**	1.25 (0.28)	4.51**
	No (Ref)				
Age	50 years or older	- 1.37 (0.30)	- 4.61**	- 1.10 (0.30)	- 3.70**
	35 – 49 years	- 0.26 (0.31)	- 0.83	- 0.21 (0.31)	- 0.67
	18 – 34 years (Ref)				
Age x Online Flirtation Interaction	Flirted: 50 years or older	2.07 (0.44)	4.74**	1.81 (0.44)	4.16**
	Flirted: 35 – 49 years	1.06 (0.43)	2.35*	0.96 (0.43)	2.25*
	Flirted: 18 – 34 years (Ref)				
Education	Some College	0.45 (0.19)	2.35*	0.34 (0.19)	1.78
	No College (Ref)				

Online US adults=US adults who have used the Internet or checked email, β = logistic regression coefficient, SE=standard error, t=t statistic, significance: * $p < 0.05$, ** $p < 0.01$.

Note: The Income effect and the Age x Gender Effect were non-significant and were deleted from reported model

FINDINGS RELATED TO RESEARCH QUESTIONS

Review of the information previously presented provide answers to the three research questions:

RQ1: Are women between the ages of 18-34 years just as likely as men to signal their romantic interest by engaging in online flirtation?

Based on our findings, women between the ages of 18-34 years just as likely as men to signal their romantic interest by engaging in online flirtation.

RQ2: Are women ages 50 years or older less likely to signal their romantic interest by engaging in online flirtation?

In relation to our second research question, women ages 50 years or older are less likely to signal their romantic interest by engaging in online flirtation.

RQ3: Do adults ages 50 years or more who flirt online more likely to use online a dating website or app?

Finally, based on the third research question, adults ages 50 years or more who flirt online are more likely to use online a dating website or app.

IMPLICATIONS

What is of special interest concerns something that has not yet been completely addressed— Generation X. Individuals of this generation, specifically those who flirt online, are more likely to use dating websites or applications than their younger counterparts (i.e., Millennials). At first glance, this may be surprising given the reputation for younger consumers to be more prone to utilizing digital media. However, it makes sense given the lifestyle habits of Gen Xers. These individuals may not be digital natives, but they are certainly technologically savvy. They are waiting longer to marry (late 20s to early 30s), and women are characterized as being more assertive when it comes to pursuing romantic relationships. Frequent job and location changes also emphasize the desirability of “portable” and less romantic relationships given the convenience of finding potential short-term mates on the Internet (Generation X, n.d.). So what does this mean from a marketing perspective? Since online flirting appears to be connected to the

use of dating websites and applications, it can be viewed as a valuable stepping stone to attract Gen X members or subscribers to digital dating services. Dating websites and apps that offer “free” services that enable potential users to interact with one another—that revolve flirting activities—may build enough interest for users to opt for paid services. This focus could also be used as a central theme for marketing campaigns. Aside from this, and arguably, because the common thread is online flirting, it might be beneficial to implement this finding for different styles of online dating options—whether it is for those sites or apps that focus on more casual encounters or for options designed to facilitate long term partnerships.

As mentioned, the same goes for Baby Boomers. Those who flirt online are also more likely than Millennials to use online dating websites and applications. However, when not taking online flirting into account, it appears women over the age of 50 are less likely to use digital dating options than men of the same age. So why is this? Perhaps females were less likely to disclose flirting online. Or maybe the definition of online flirting varies based age group, namely for Boomers. Regardless, it seems the solution here may be to further investigate the meaning of online flirting among Boomer females. Yet the findings suggest men age 50 and over of the same age are flirting online, which lends itself to marketing strategies designed to attract Baby Boomers. Overall, this target is arguably a valuable market for digital dating tools, given desire of these individuals to live active lifestyles and to spend money on leisure activities (Olenski, 2015). It is also important to note it would be both inaccurate and disparaging to simply assume everyone over the age of 50 is technologically incompetent and unable to move on with the times. The concept of social networks diminishing with age is certainly plausible for promoting online dating as the predominant way to meet new partners for older adults. However, it completely ignores the growing trend of financially well (not necessarily rich, just stable) older singles or couples moving into 50+ developments or almost taking over certain locations (for example, in the state of Florida); the 50+ travel industry (cruises, resorts, casinos, etc.); and entire cities planning on recruiting the 50+ populations, such as Albuquerque, NM, St. Louis, MS, and Pittsburgh, PA boasting opportunities for retirees to get by on their Social Security payment due to lack of state income tax and other retiree-specific benefits (The 10 Best Places, 2014).

When it comes to Millennials and online flirting, the research indicates there is a growing sense of equality among genders when it comes to the frequency of communicating interest in one another, in a digital sense. Is this closing the gender divide, at least in terms of online flirting? If so, from marketing perspective, it may be advantageous to focus on the creation and promotion applications centered upon on flirting functions. Ideally, the equal time spent flirting online among males and females should also arguably be taken into consideration when determining how to market these applications. When the lifestyles of these individuals change (such as graduating college, moving to a new city, or changing jobs), familiarity with a flirting website or app may also be a helpful gateway for promoting an associated online dating website or application.

FUTURE RESEARCH

Aside from utilizing this study as a stepping stone for further examination of consumer use of online dating websites and applications, there appears to be another idea of interest. Most studies examine online dating to ‘traditional’ or ‘conventional’ heterosexual dating, therefore falling on familiar gender roles in their exploration of participants’ values and attitudes. Unsurprisingly, previous research indicates women online daters appear to be looking for male partners with ‘status’ (healthy and financially stable) and who can accommodate an ‘active lifestyle’, while male online daters are seeking thin (rather than large-size), younger (by up to 15 years), sexually attractive (well maintained) female partners who can help shoulder household chores—a situation resembling the equity trade-off in the ‘marriage mart’ metaphor (Heino, Ellison & Gibbs 2010). It would be advantageous to dig deeper to further explore to what degree are these preferences influenced by study participants’ education and income level, and, furthermore, are they reflected in the overall adult population?

CONCLUSION

The data used for this study was collected by the Pew Foundation's "Internet and American Life Project Tracking Survey," conducted in Spring 2013. The study examined use of online dating websites, use of dating applications, and online flirting activity. The data was adjusted through the use of sampling weights to estimate for general population parameters. Findings suggest women between the ages of 18-34 years just as likely as men to signal their romantic interest by engaging in online flirtation. In addition, women ages 50 years or older are less likely to signal their romantic interest by engaging in online flirtation. Also, adults ages 50 years or more who flirt online are more likely to use an online dating website or app. Marketing implications include a promotional focus on “flirting” promotional options for Generation X individuals, an emphasis on geographic and active lifestyles approaches for Baby Boomers, and a re-examination of strategies for Millennials.

REFERENCES

- Alterovitz, S.S.R. & Mendelsohn, G.A. (2009). Partner preferences across the life span: Online dating by older adults. *Psychology and Aging*, 24(2), 513-517.
- Bilton, N. (2014, October 29). Tinder, the Fast-Growing Dating App, Taps an Age-Old Truth. *The New York Times*. Retrieved November 2 from <http://www.nytimes.com/2014/10/30/fashion/tinder-the-fast-growing-dating-app-taps-an-age-old-truth.html>
- Blackhart, G.C., Fitzpatrick, J. & Williamson, J. (2014). Dispositional factors predicting use of online dating sites and behaviors related to online dating. *Computers in Human Behavior* 33, 113-118
- Cali, B.E., Coleman, J.M., & Campbell, C. (2013). Stranger Danger? Women’s self-

protection intent and the continuing stigma of online dating. *Psychology, Behavior, and Social Networking* 16(12), 853-857

Cominole, M., Riccobono, J., Siegel, P., & Caves, L. (2012). 08 National Postsecondary Student Aid Study (NPSAS: 08) full-scale methodology report (NCES 2011–188). US Department of Education. Washington, DC: National Center for Education Statistics.

Comscore (2014). Tinder Sparks Renewed Interest in Online Dating. Retrieved October 25, 2015, from November 2 from <http://www.comscore.com/Insights/Blog/Tinder-Sparks-Renewed-Interest-in-Online-Dating-Category>

Couch D., Liamputtong P., & Pitts, M. (2012). What are the real and perceived risks and dangers of online dating? Perspectives from online daters. *Health, Risk & Society*, 14(708), 697-714.

Drouin, M., & Landgraff, C. (2012). Texting, sexting, and attachment in college students' romantic relationships. *Computers in Human Behavior*, 28(2), 444-449. <http://doi.org/10.1016/j.chb.2011.10.015>

Ferguson, D. A., Greer, C. F., Reardon, M. E. (2007). Uses and gratifications of MP3 players among college students: Are iPods more popular than radio? *Journal of Radio Studies*, 14(2), 102-121.

Finkel, E.J., Eastwick, P.W., Karney, B.R., Reis, Harry.T., & Sprecher, S. (2012). Online dating: A critical analysis from the perspective of psychological science. *Psychological Science in the Public Interest*, 13(1), 3-66.

Generation X [Born 1965–1980]. Retrieved October 15, 2015 from http://www.valueoptions.com/spotlight_YIW/gen_x.htm

Geser, H. (2007). Online search for offline partners: Matching platforms as tools of empowerment and retraditionalization. *Sociology in Switzerland: Towards Cybersociety and Virtual Social Relations*. http://socio.ch/intcom/t_hgeser19.pdf (Accessed online Oct. 15, 2015).

Guadagno, R.E. & Sagarin, B. J. (2010). Sex differences in jealousy: An evolutionary perspective on online infidelity. *Journal of Applied Social Psychology* 40(10), pp. 2636-2656.

Gudelunas, D. (2012). There's an App for that: The Uses and Gratifications of Online Social Networks for Gay Men. *Sexuality & Culture*, 16(4), 347–365. <http://doi.org/10.1007/s12119-012-9127-4>

Hall, J. A., Park, N., Song., & Cody, M.J. (2010). Strategic misrepresentation in online dating: The effects of gender, self-monitoring, and personality traits. *Journal of Social and Personal Relationships*, 27(1), 117-135.

Harwell, D. (April, 2015). Online dating's age wars: Inside Tinder and eHarmony's fight for our love lives. Retrieved November 2 from <https://www.washingtonpost.com/news/business/wp/2015/04/06/online-datings-age-wars-inside-tinder-and-eharmonys-fight-for-our-love-lives/>

Heeter, C., & Greenberg, B. (1985). Cable and program choice. In D. Zillman & J. Bryant (Eds.), *Selective exposure to communication* (pp. 203-224). Hillsdale, NJ: Lawrence Erlbaum.

Heino, R. D., Ellison, N. B., & Gibbs, J. L. (2010). Relation shopping: Investigating the market metaphor in online dating. *Journal of Social and Personal Relationships*, 27(4), 427-447. <http://doi.org/10.1177/0265407510361614>

Kwak, H. (2012). Self-disclosure in online media. *International Journal of Advertising*, 31(3), 485–510. <http://doi.org/10.2501/IJA-31-3-485-510>

Lo, S.H., Hsieh, A.Y., & Chiu, Y.P. (2013). Contradictory deceptive behavior in online dating. *Computers in Human Behavior* 29, 1755-1762.

Lumley, T. (2004). Analysis of complex survey samples. *Journal of Statistical Software*, 9(1), 1–19.

Lumley, T. (2014). Survey: analysis of complex survey samples. R package version 3.30.

Match Group Shares Find Investor Love After IPO (2015). Retrieved November 9 from <http://fortune.com/2015/11/19/match-group-shares-find-investor-love-after-ipo/>

McWilliams, S. & Barrett, A.E. (2014). Online dating in middle and later life: Gendered expectations and experiences. *Journal of Family Issues*, 35(3), pp. 411-436. DOI: 10.1177/0192513X12468437

National Center for Education Statistics. (2014). DAS Website - User Help Center. Retrieved October 24, 2014, from <http://nces.ed.gov/dasol/help/ttest.asp>

Norton, A.M. & Baptist, J. (2014). Couple boundaries for social networking in middle adulthood: Associations of trust and satisfaction. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 8(4). Doi: 10.5817/CP2014-4-2

Olenki, S. (2015). 7 Reasons Why Marketing To Baby Boomers Is Unique. Retrieved November 21, 2015, from <http://www.forbes.com/sites/steveolenski/2015/06/05/7-reasons-why-marketing-to-baby-boomers-is-unique/>

R Core Team. (2014). R: A Language and Environment for Statistical Computing.

Vienna, Austria: R Foundation for Statistical Computing. Retrieved from <http://www.R-project.org>

Rubin, A. & Bantz, C. (1987). Utility of videocassette recorders. *American Behavioral Scientist*, 30 pp. 471-85. Signorielli, N. & Morgan, M. (Eds.).

Ruggiero, T. E. (2000). Uses and gratifications in the 21st century. *Mass Communication & Society*, 3(1), 3-37.

Schramm, W., Lyle, J., & Parker, E. (1961). *Television in the lives of our children*. Stanford, CA: Stanford University Press.

Smith, A. & Anderson, M. (2015). 5 facts about online dating. Retrieved October 26, 2015 from <http://www.pewresearch.org/fact-tank/2015/04/20/5-facts-about-online-dating/>

Smith, A., & Duggan, M. (2013). *Online Dating & Relationships*. Washington, DC. Retrieved from <http://www.pewinternet.org/2013/10/21/online-dating-relationships/>

Smith, H., Rogers, Y., & Brady, M. (2003). Managing one's social network: Does age make a difference? In Rauterberg et al. (Eds.) *Human-Computer Interaction*, IOS Press, IFIP, pp. 551-558.

Statistics and facts about Online Dating (n.d.). Statista. Retrieved October 25, 2015, from <http://www.statista.com/topics/2158/online-dating/>

The 10 Best Places to Retire on Social Security Alone. (2014). Retrieved November 2, 2015, from <http://money.usnews.com/money/retirement/articles/2014/10/14/the-10-best-places-to-retire-on-social-security-alone>

Wada, M., Clarke, L.H., & Rozanova, J. (2015). Constructions of sexuality in later life: Analyses of Canadian magazine and newspaper portrayals of online dating. *Journal of Aging Studies*, 32, 40-49.

Wells, G. (2015, June 11). Love on the Rocks --- An explosion of dating sites and apps is making it harder to turn a profit in the matchmaking game. *Wall Street Journal*, Eastern Edition, p. B.1. New York, N.Y., United States.

Wimmer & Dominick. (2013). *Mass Media Research* (10 edition). Australia: Wadsworth Publishing.

ABOUT THE AUTHORS

Kristine Johnson teaches advertising courses at Rowan University. She received her Ph.D. in mass communication at Florida State University and enjoys researching the impact of digital media on personal connections and consumer behavior.

Olguta Vilceanu is an Assistant Professor of Advertising at Rowan University. She received her Ph.D. in mass media and communication from Temple University. Her research explores the connection between international news media, advertising, marketing, technology, and consumer behavior.

Manuel Pontes is a Professor of Marketing at Rowan University. He received his Ph.D. in marketing from the University of Florida. One of his major research interests is in how people use the Internet, especially with mobile devices.

