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College Dating and Social Anxiety: Using the Internet as a Means of Connecting to

Others

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Thesis submitted to the
Eberly College of Arts and Sciences
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ABSTRACT

College Dating and Social Anxiety: Using the Internet as a Means of Connecting to Others

Sarah B. Stevens

With the advent and widespread use of the Internet, various online media are being used to connect and maintain social relationships in individuals of all ages. Social relationships are vital to healthy development, and individuals with social and/or dating anxiety may have marked difficulty in establishing appropriate, supportive relationships due to fear of negative evaluation by others. For these individuals, the Internet may open up avenues of communication, and provide an outlet through which relationships can be formed and preserved. This study investigated the characteristics of computer and Internet use in young adults, to determine whether individuals who were high in social/dating anxiety symptoms were more likely to make and maintain social relationships online. To further understand the patterns of these behaviors, several measures of social and dating anxiety were collected and analyzed along with demographic, computer use, and relationship characteristics. Results indicated differences between high and low social/dating anxiety with respect to media use and relationship formation. Limitations and future directions are discussed.

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In Loving Memory of Joan Stevens

1919-2006

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College dating and social anxiety: Using the internet as a means of connecting to others

The Internet is arguably one of the most important and technologically advanced inventions of our time. It connects the world to vast amounts of information with just the touch of a button; people in every corner of the globe can get up to date news on current events, weather changes, and a myriad of other things. The advent of the computer age, coupled with the enormity of information available on the Internet has enabled young and old to access many areas of knowledge. Due to increases in computer ownership as well as reductions in online service fees, the Internet has become progressively more available for most people in the United States. According to Internet World Statistics (2005), over 218 million people in North America have and use Internet access, an increase of 102% since the year 2000. Approximately 66% of adults go online, with females and males equally as likely to use the Internet (65% vs. 66%). There are racial/ethnic and socio-economic differences in Internet usage: 68% of Caucasian individuals use the Internet regularly versus 51% of African American individuals, and use increases from 48% in households with an income of less than $30,000 a year to 92% in households with an income of greater than $75,000. Age is also a factor in Internet usage; the two largest age groups for online usage are children under the age of 18 and college-aged adults, with 97% and 81% of persons, respectively, going online (Pew Internet and American Life Study, 2005; UCLA Internet Report, 2002). Not surprising when we consider that these cohorts have never lived in a world without the Internet. The number of hours spent online has risen for all ages in the past few years, from an average of 9.4 hours per week in 2000 to 11.1 in 2002 (UCLA Internet Report, 2002).

Use of the Internet as a communication tool. One of the greatest contributions of the Internet is its substantial impact in the area of communication (Kraut et al., 2002; Pew Internet and American Life Study, 2005). Through its use, people are able to keep in touch with one another in real time; one can send letters, photos, even videos to family and friends near and far. The Internet has connected us in ways that we are only just beginning to understand; individuals that may only be able to see each other face to face a few times a year are now able to keep in close contact. It is no wonder that we have dubbed it the "world wide web;" it connects us together despite great distances. A variety of media exist on the web for people to use in maintaining ties with others. In the year 2004, over 90% of people who used the Internet utilized electronic mail, otherwise known as e-mail, making it the most popular communication medium (Pew Internet and American Life Project, 2005). However, other online services are fast becoming increasingly popular forms of interaction. These services include instant messaging (IM), chat rooms, web cams, web logs (blogs), bulletin boards, and online personal dating services. In order to remain connected to those we know, or even meet those we wish to know, we have expanded our traditional behavioral repertoires to include the new and increasingly common online media. According to the Pew Internet Report and the American Life Project, 42% of Internet users stated that they had utilized IM, with 14% stating that they used IM daily; 27% endorsed reading "blogs," while 7% stated that they had created a "blog" of their own; 25% acknowledged participating in chat room discussions, with 4% chatting daily; and 9% stated that they had used online dating sites. These figures are the result of random digit dialing and online surveys. Other reports have shown that up to 34 million people have visited online dating sites, the

most popular and well-known being Match.com, Yahoo! Personals, and e-Harmony.com (Sullivan, 2002).

With the large swell in Internet usage, there has been some controversy regarding whether the Internet has actually helped us to become more social and establish closer relationships. Kraut et al. (1998) reported several negative effects of the dramatic increase in Internet use. The authors stated that while the Internet should, in theory, improve existing relationships by increasing social involvement and forming new relationships, it has been shown to have a negative effect on so called "heavy" users who become "paradoxically" less socially involved, lonelier, and more likely to endorse depressive symptoms. Though the initial study was criticized for lacking a control group, a subsequent follow-up study of 208 of the original 335 respondents found that the negative effects had lessened (Kraut et al., 2002). As a caveat, though, the authors stated that the positive effects of Internet use were larger for extroverts than introverts; specifically, extroverts who had high Internet usage were more likely to report greater community involvement, while introverts with high Internet usage were more likely to report lesser community involvement. Similarly, a study by Morahan-Martin and Schumacher (2003) showed that individuals high in loneliness were more likely to use the Internet and e-mail as a means of connecting to others than non-lonely individuals. Lonely individuals also were more likely to show negative effects in daily functioning as a result of high levels of Internet use.

Despite some studies to the contrary (Kraut et al., 1998; Wästlund, Norlander, & Archer, 2001), several studies have shown that a large percentage of people feel that the Internet has enriched their social connectedness (Chen, & Persson, 2002; UCLA

Internet Report, 2002). According to the UCLA Internet Report (2002), 48.7% of people strongly agreed that the Internet allows them to connect better with family and friends and 50.9% stated that the internet had increased the number of people with whom they stayed in contact. With the myriad of communication media available on the Internet, it is easy to see how people can connect with known friends or even meet others, despite distance, location, and time.

Use of the Internet in a socially-anxious college population. College is a time of dramatic change in the lives of young adults (Berzonsky, & Kuk, 2000; Ponzetti, 1990; Wilcox, Winn, & Fyvie-Gauld, 2005). Many teens must begin a new life away from home, with increased responsibility for themselves and their schoolwork. Changes in social situations are common place as well: whereas in high school there was an intact social circle of friends, in college, many students may have to make new friends in a new area, or find that friends so close in high school become strangers in college. For those with no difficulty in social situations, this time is one of excitement and wonder. The chance to meet others, either in platonic or romantic relationships, or reinvent a persona in college is an exciting and wonderful idea. But for individuals with social or dating anxiety, the process can become terrifying. These individuals may become further isolated, having to move to a new place without the safety of established social circles.

Social anxiety is defined as the fear of negative evaluations by others in social situations, while dating anxiety is defined as apprehension and discomfort in interactions with a potential romantic partner (*APA*, 2000; Hope & Heimberg, 1990). Both of these conditions are marked by fear and anxiety of such situations, and often result in avoidance of social and/or dating scenarios, making it difficult to connect in

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reinforcing social engagements. Socially-anxious individuals often are characterized by low numbers of close friends and acquaintances. Despite the desires to meet and engage in platonic or romantic relationships, socially-anxious individuals often are unable to make the necessary effort for fear of negative evaluation by others.

The lack of romantic and platonic attachments also may be a significant factor in the development of other social and mental health problems. Individuals with severe social and/or dating anxiety may be more likely to experience distress in other areas as a result of insufficient interpersonal relationships. Davila and Beck (2002) examined the association between social anxiety and other areas of impairment and found that social anxiety symptoms significantly correlated with symptoms of depression, as well as with over reliance on others and increased interpersonal stress. They also found that individuals with higher social anxiety symptoms were more likely to avoid expressing strong emotions, and report a desire to avoid conflict. These associations were found even after controlling for depression. Additionally, individuals with social/dating anxiety may be more likely to report loneliness in their daily lives. There has been substantial linkage between the two constructs; researchers have reported correlations from .41 to .50 (Anderson & Arnoult, 1985; Jones et al., 1986). Loneliness is described by Morahan-Martin (1999) as a "discrepancy between the[ir] desired and achieved level of social interaction, support, and intimacy." Increased levels of loneliness have been associated with depression, anxiety, and substance abuse (Booth, 2000). In looking at an adolescent population, La Greca and Harrison (2005) found that individuals who were not dating were higher in social anxiety than those who were currently in a relationship. Himadi et al. (1980) examined minimal dating and its association to other

social problems and found that men who engaged in lower rates of dating showed deficiencies in same-sex relationships, as well.

However, with the advent of the Internet and its numerous communication services, many people are using the web as a potential avenue to find romantic and platonic partners. Donn and Sherman (2002) found that 7.7% of college students and 19.7% of graduate students had taken steps to meet a potential romantic partner online. Knox, Daniels, Sturdivant, and Zusman (2001) found that 40% of their college sample had used the Internet to gain and establish new friendships, while 7% reported becoming romantically involved with a person they met online. This study also showed that the major function behind Internet use was anxiety reduction, with respondents stating that they felt less shy online than in person. These studies suggest that persons with social or dating anxiety have a potential avenue by which to explore the relationships they desire in a less threatening manner than the traditional face-to-face interactions that others may use. Some research already has suggested that individuals with social anxiety may be more inclined to seek out personal relationships over the Internet. Ward and Tracey (2004) found that individuals high in shyness were more likely to become involved in online relationships. In her unpublished dissertation research, McKenna (1999) found that socially-anxious people were more likely to use the Internet to form relationships, and that these relationships typically developed more quickly than their face-to-face counter parts. In a survey of over 600 internet newsgroups and 2 laboratory studies conducted at Ohio University, the author found that due to so-called "gating features" inherent in the face-to-face meeting process, many individuals with performance or evaluation anxiety were more likely to use the

internet as a means to connect to others. Gating features include physical appearance variables, such as height and weight, as well as other aspects of personality, speech, and self-presentation that may hinder the initial positive evaluation by a potential partner or friend. These gating features may be of particular concern for individuals with social anxiety, as they may perceive the physiological characteristics associated with their distress, such as shaking, sweating, and blushing, as off-putting or negatively evaluated by others. Individuals who use the Internet to obtain or maintain relationships may feel more at ease conducting the initial phases of a relationship online, where the gating features are not as salient. Depending upon the level of anxiety associated with their personal aspects, they may be more or less accurate in their description. For example, a person who is highly anxious or critical of their height or weight may choose to be inaccurate in their description as a way of advancing an online relationship. In a later study expanding upon her findings, McKenna and her colleagues found that the more people portrayed their "true self" online, the more likely they were to meet their partner face-to-face (McKenna, Green, & Gleason, 2002). Twenty Usenet groups were randomly selected, although "personals" and "pen pals" newsgroups were removed to control for individuals who were deliberately seeking relationships. A 36-item survey was used to assess level of anxiety and relationship formation variables (expression of "real self," type and depth of relationship formed, and behavioral actions), including six items from the Leary's Interaction Anxiousness Scale and five items from the UCLA Loneliness Scale.

There is evidence that there may be a large number of individuals online with social anxiety. Erwin et al. (2004) found that individuals who responded online to a

survey of social phobia symptomatology had greater levels of severity and impairment than a treatment-seeking sample, suggesting that some were so severe they were unable or unwilling to seek treatment for their problems, or that answering questions online increases symptom reporting. This information, coupled with the variety of media available for communication begs the question, what type of media are socially anxious individuals most likely to utilize in beginning online relationships?

Need for the Present Study

Social support and interaction is a crucial part of everyday life, even more so in the critical college years (Calsyn, Winter, & Burger, 2005; Largo-Wight, Peterson, Chen, 2005; Mallinckrodt, & Wei, 2005). The present study seeks to examine current college dating practices and the use of Internet communication media by individuals with and without social anxiety. Very little is known about current dating practices in college samples, especially in light of the dramatic increases in Internet access and use in recent years. First, one must gain an understanding of the current methods and practices being used by a college population to establish romantic and platonic relationships. Then, one must ascertain the rate of computer usage, for both general uses such as class work, and for personal communication. By rating a person's level of social and dating anxiety, one can examine the ways in which these individuals differ from non-anxious controls in terms of usage, type of media, etc. After establishing the cutoff level for high and low social and dating anxiety, we may examine the types of media, if any, these individuals are using. By ascertaining what online methods are mostly likely to be used by individuals high in social anxiety, clinicians may be able to use the Internet as an exposure tool for clients presenting with social or dating anxiety.

Of particular interest are the frequency, severity, and specificity of symptoms of social and/or dating anxiety with relation to aspects of Internet involvement.

The following hypotheses were tested:

H1: Individuals low on anxiety are more likely to meet others and engage in dating practices than individuals high in social and/or dating anxiety.

H2: Individuals high in social and/or dating anxiety are more likely to use the Internet to make and maintain romantic and platonic relationships than typical college students.

H3: Severity of anxiety symptoms is related to type or mode of involvement, with those most severe more likely to engage in media in which less personal identification is used.

H4: Severity of anxiety symptoms is related to whether or not a face-to-face meeting has occurred, with those most severe being less likely to have a real-life meeting.

Method

Participants

Participants were recruited from various undergraduate psychology classes at West Virginia University, including Introduction to Psychology, Human Development, and Social Psychology; approximately 2,000 students were enrolled in these classes, and were eligible for participation. The study was conducted in October of 2005, and was open for approximately one month. Seven hundred and eight participants were recruited; however, 40 participants were dropped due to being under the age of consent or over age 25. The final subject pool consisted of 666 (472 females and 194 males)

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participants, who were asked to complete survey and questionnaire data to gauge demographic information, computer use, and level of social and dating anxiety.

Procedure

Information about the study and its benefits was presented to various psychology classes, and participants were allowed to log in to a website to participate in the study. After receiving a log-in username and password for the SONA web system, participants were asked to fill out anonymous demographic, computer use, and relationship surveys, as well as several questionnaires regarding social and dating anxiety levels. Measures were presented in order from least to most intrusive or sensitive in nature. Completion of all measures took approximately 1 hour, and participants received extra credit for their participation in the study.

Measures

Demographic Questionnaire. A demographics questionnaire was created for use in this particular study. Surveys were given to gather information on age, sex, race/ethnicity, sexual orientation, and year in college. See Appendix A.

Computer/Internet Use Questionnaire. The Computer/Internet Use questionnaire was developed for this study to gain information about computer use, and Internet media use in particular. Questionnaires gathered information concerning: computer ownership; Internet access; amount of time spent on the Internet; level of use of Internet services such as e-mail, instant messaging, chat rooms, web logs, web cams, and online dating services; level of comfort with the previously listed media; number of relationships made online; type of relationships made online; face to face meetings which may have taken place with those met online, etc. Questions used specifically for

analysis included: Question 30, (Have you ever made an online relationship?) which was used to gauge whether the participant had made a relationship online prior to seeing the person face to face; Question 31, (How many online relationships have you made?) to assess the number of individual relationships the participant had made online; Questions 31, 32, and 33, which assessed the nature of the online relationships; Question 34, (Did a face-to-face meeting result from this online relationship?) to determine whether the participant had met the online partner outside of the Internet; Questions 36, 37, and 38, which examined the online media used to make and maintain the online relationship; and questions 39 and 40, which assessed other communication that may have occurred (i.e., telephone and snail mail). See Appendix B.

Friendship and Dating Practices Questionnaire. The Friendship and Dating Practices questionnaire was developed for this study to obtain information about participant relationships. The questionnaire gathered information concerning: participant's dating history; whether they have a significant other; length of relationship with significant other; how the participant met his/her significant other; opinion on the definition of a date; style of date most used; first-date practices; presence of a best or closest friend; how the participant met their best/closest friend, etc. Questions used specifically for analysis included: Question 1, (Have you ever been on a date?) which was used to gauge whether the participant had ever been on a date; Question 2, (Have you been on a date in the last 6 months?), which was used to assess current dating practices; and Question 3, (Do you have a significant other?), which was used to assess current romantic relationship status. See Appendix C.

Social Phobia and Anxiety Index. (Turner, Beidel, Dancu, & Stanley, 1989). The Social Phobia and Anxiety Index (SPAI) is a 45-item questionnaire that assesses level of anxiety with respect to social situations. Participants are asked to rate each statement on a scale from 0 (never) to 7 (always). Example statements include: "I feel anxious when approaching and/or initiating a conversation with strangers/authority figures/opposite sex/people in general," "I feel so anxious about attending social gatherings that I avoid these situations" and "I am not likely to speak to people unless they speak to me." The measure has demonstrated excellent test-retest reliability (.86), with an alpha of .96 for the social phobia subscale. Several studies have shown high discriminant and external validity (Beidel, Turner, Stanley, & Dancu, 1989; Peters, 2000), as well as high concurrent validity with the Social Anxiety Scale (r=.87), and the Fear Questionnaire (r=.92) (Davidson et al., 1991).

Dating Anxiety Survey. Developed by Calvert, Moore, and Jensen (1987), the Dating Anxiety Survey (DAS) assesses anxiety related to dating and romantic situations. The 23-item questionnaire has both male and female versions, although for the purposes of this study, it was modified in order to be applicable to gay, lesbian, and bi-sexual individuals. The survey is divided into three subscales: passive contact, dating interactions, and active interventions for dating. Previous studies have shown alphas that ranged from .87 to .93 for each subscale across male and female versions. The measure has demonstrated concurrent validity with other measures of dating and social anxiety. See Appendix D.

Dating and Assertion Questionnaire. (Levenson & Gottman, 1978). The Dating and Assertion Questionnaire (DAQ) assesses social competence in dating interactions

and situations, as well as situations for which assertive behavior is needed. The DAQ is an 18-item questionnaire divided into two subscales: a 9-item dating subscale and a 9-item assertion subscale. For this study, only the dating subscale was used. The dating subscale provides examples of social situations and asks respondents to rate their competence, discomfort, and likelihood of behavior occurring on a scale from 1 (I never do this) to 4 (I do this almost always). Excellent internal consistency (α = .92 for the dating subscale) and test-retest reliability over a 4 week period (r = .71 for week 2 and r = .62 for week 6) were noted by Levenson and Gottman (1978). See Appendix E.

Results

Sample Characteristics. The sample was composed of 472 female (71%) and 194 male (29%) respondents. The age of the respondents ranged between 18 and 24 years of age, with a mean age of 19 years. Demographic data are presented in Table 1.

SPAI. The overall mean of the SPAI for all 666 participants was 50.43, with a standard deviation of 24.06. For some of the analyses, SPAI scores were classified into high and low groups for use in binary logistic regression. Individuals who were rated "high" were those whose total SPAI scores placed them in the "Probable Social Phobia" (difference scores greater than or equal to 80) and "Possible Social Phobia" (difference scores between 60 and 79) ranges, while those rated "low" were individuals whose scores placed them in the "Social Phobia Unlikely" (difference scores less than 34) range. The mean of the "high" SPAI group (N = 212) was 77.41 with a standard deviation of 14.76. The mean of the "low" group (N = 160) was 20.06 with a standard deviation of 10.28.

DAS. The overall mean of the DAS for all 666 participants was 102.40 with a standard deviation of 24.14. For some of the analyses, DAS scores were classified into high and low groups for use in binary logistic regression. Using the 25th and 75th percentiles on the Dating Anxiety Survey, respondents were classified as "high" and "low" dating anxiety. The mean of the "high" DAS group (N = 167) was 128.39 with a standard deviation of 8.34, while the mean of the "low" dating anxiety group (N = 179) was 69.34 with a standard deviation of 16.64.

DAQ. The overall mean of the DAQ for all 666 participants was 26.87 with a standard deviation of 4.32. . For some of the analyses, DAQ scores were classified into high and low groups for use in binary logistic regression. Using the 25th and 75th percentiles on the Dating and Assertion Questionnaire, respondents were classified as "high" and "low" dating anxiety. The mean of the "high" dating anxiety group (N = 181) was 21.59 with a standard deviation of 2.78, while the mean of the "low" dating anxiety group (N = 174) was 32.25 with a standard deviation of 2.19. Reverse scoring was used on the DAQ; thus a lower score indicated higher levels of dating anxiety.

Computer use. Approximately 98% of the sample stated that they both owned a computer and had access to the internet. Fifty-one percent of respondents reported spending one to three hours on the internet daily, while 11% reported less than one hour online, 25% reported spending three to five hours online, 9% reported spending five to seven hours per day, and 4% reported spending more than 7 hours per day. For individuals in the high social anxiety group, 50% reported spending one to three hours online per day, while 14% reported spending less than one hour, 22% reported spending three to five hours, 9% spending five to seven hours, and 6% spending more

than seven hours. By contrast, 51% of the low anxiety group reported spending one to 3 hours online per day, while 11% reported spending less than one hour, 26% reported spending three to five hours, 8% reported spending five to seven hours and 5% spending more than seven hours per day online. A chi-square test was conducted to determine if there were differences between high and low social anxiety groups with regards to time spent online. The test was not significant, $X^2(4) = 1.08$, $p > .05$. Therefore, no differences were found between high and low social anxiety groups and time spent online.

Approximately 98% of the sample reported using electronic mail (email), with 51% checking email multiple times per day. Additional media use data (e.g., "Have you ever used IM?") are presented in Table 2. Respondents were asked to rate their experience and comfort level with the various media on a 5-point Likert scale. Females as a whole indicated that they were most experienced with email (90%) and IM (87.7%), and most comfortable using email (87.5%) and IM (91.6%). Similarly, males as a whole indicated that they were most experienced with email (89.7%) and IM (90.7%), and most comfortable with email (90.7%) and IM (91.2%).

With regard to the development of online relationships, 28.5% of respondents (28.8% of women and 27.8% of men) stated that they had made at least one online relationship. Of those who indicated an online relationship, approximately 31% stated that they made one, 18% reported making two, 16% reported making three, 30% reported making four or more, with 5% missing. The most common nature of the online relationship was Friend (47%), with Acquaintance (37%), Romantic Partner (10%) and Close/Best Friend (5%) also represented. Approximately 70% of those who made an

online relationship indicated that a face-to-face meeting took place. The most common media used to maintain online relationships were IM (86%), and email (6%). Sixty-four percent of respondents indicated that they spoke on the telephone to the person with whom they had the online relationship.

Relationship data. Approximately 99% of the sample indicated that they had been on a date at some point in their lives, while 89.8% stated that they had been on a date in the last 6 months. Sixty-seven percent of women and 53% of men stated that they currently had a significant other. Twenty-five percent of respondents reported being in a relationship with their significant other for one to three years, while an additional 29% reported being in a relationship for less than a year. Only 2% of respondents stated that they had been in a relationship for more than 5 years.

Correlational data. Pearson correlations were conducted to assess the association between the demographic variables, the relationship variables, online media use variables and measures of social and dating anxiety between groups (i.e., high vs. low social anxiety). Correlational data for the demographic measures are presented in Table 3. A significant difference was found between the high and low groups in the correlation between sexual orientation and race/ethnicity, with the high social anxiety group being more highly correlated. Correlational data of online media variables are presented in Table 4. A significant difference was found between the high and low groups in the correlations between chat room and email use, email and webcam use, chat room and webcam use, blog and webcam use, and webcam and dating site use. Correlational data of relationship variables and measures of social/dating anxiety are presented in Table 5. A significant difference was found between the high and low

groups in the correlations between ever been on a date and been on date in last 6 months, ever been on a date and DAQ score, date in the last 6 months and having a significant other, date in the last 6 months and DAQ score, SPAI score and DAQ score, and DAS score and making an online relationship. Correlational data of demographic and online media variables are presented in Table 6. A significant difference was found between the high and low groups in the correlation between year in school and IM use, and online dating site use and sexual orientation. Correlational data of demographic, relationship variables, and measures of social/dating anxiety are presented in Table 7. Correlational data of media use variables, relationship variables and measures of social/dating anxiety are presented in Table 8. A significant difference was found between the high and low groups in the correlation between DAS score and IM use.

Predicting social anxiety. Chi square tests were conducted to examine the whether demographic variables, relationship variables, or media use variables were related to social anxiety. A significant relation was found between SPAI group and the use of blogs in online communication, $X^2(1) = 6.083$, $p < .05$. To examine predictors of social anxiety, binary logistic regression was conducted. First, demographic variables (year in school, gender, race, sexual orientation) were entered as predictors of scores on the SPAI. Approximately 58% were correctly classified. The high SPAI group contained 208 participants, and the low SPAI group contained 154. The overall model was not significant, $X^2 (4) = 4.432$, $p > .10$.

Second, making an online relationship was entered as a predictor of social anxiety status. The overall model was not significant, $X^2 (1) = .488$, $p > .05$. Making an online relationship was not a unique predictor of social anxiety status.

Third, media use variables (email, chat rooms, IM, blogs, webcams, online dating services, telephone, and snail mail; Questions 37, 39, and 40) were entered as predictors of social anxiety status. Fifty-seven percent were classified correctly; the high SPAI group contained 212 participants, while the low SPAI group contained 160. The overall model was significant, X^2 (8) = 20.043, p < .01. Unique predictors were blog (β= -2.391, Wald = 4.631, OR = .092, 95% CI = .010-.808, p < .05) and webcam use (β= 2.181, Wald = 4.065, OR = 8.852, 95% CI = 1.063-73.740, p < .05). Thus, individuals who were low in social anxiety symptoms were almost 9 times more likely to use blogs, while individuals who were high in social anxiety were more likely to use webcams. Data are presented in Table 9.

Predicting dating anxiety. Chi square tests were conducted to examine the whether demographic variables, relationship variables, or media use variables were related to social anxiety. A significant relation was found between DAQ group and the use of webcams in online communication, X^2(1) = 3.849, p < .05, as well as between DAS group and gender, X^2(1) = 11.729, p < .01. To examine the predictors of dating anxiety, binary logistic regression was conducted. First, demographic variables were entered as predictors of scores on each of the two measures of dating anxiety. Using the 25th and 75th percentiles on the DAQ, respondents were classified as having "high" and "low" dating anxiety. Approximately 59% were correctly classified. The high DAQ group contained 181 participants, while the low DAQ group contained 174. The overall model was significant, X^2 (4) = 18.714, p < .001. Unique predictors were gender (β= -.764, Wald = 9.968, OR = .466, 95% CI = .290-.748, p < .01) and race (β=.485, Wald =

5.880, OR = 1.625, 95% CI = 1.098-2.406, p < .05). Thus, female and minority respondents were more likely to have higher dating anxiety scores on the DAQ.

Second, making an online relationship was entered as a predictor of dating anxiety status. Approximately 54% were correctly classified, with 181 participants in the high group and 174 participants in the low group. The overall model was not significant, X^2 (1) = 2.85, p > .05. Making an online relationship was not a unique predictor of dating anxiety status on the DAQ.

Third, media use variables were entered as predictors of dating anxiety on the DAQ. Fifty-one percent were correctly classified, with 181 participants in the high group and 174 participants in the low group. The overall model was significant, X^2 (8) =15.791, p < .05. Webcam use was a unique predictor (β= 2.595, Wald = 4.841, OR = 13.400, 95% CI = 1.328-135.230, p < .05); individuals who were high in dating anxiety on the DAQ were 13 times more likely to use webcams to maintain online relationships. Data presented in Table 10.

Using the 25th and 75th percentiles on the Dating Anxiety Survey, respondents were classified as "high" and "low" dating anxiety. Demographic variables were entered as predictors of DAS score, and the overall model was significant, X^2 (4) = 13.495, p < .01. Approximately 59% were correctly classified, with 179 participants in the high group and 167 in the low group. Gender was a unique predictor, with females more likely to have higher dating anxiety scores on the DAS (β= -.879, Wald =11.986, OR = .415, 95% CI = .252-.683, p < .001).

Second, making an online relationship was entered as a predictor of dating anxiety status. Approximately 53% of participants were correctly classified, with 179

participants in the high dating anxiety group and 167 in the low group. The overall model was not significant, X^2 (1) = 2.88, p > .05. Making an online relationship was not a unique predictor of dating anxiety status on the DAS.

Finally, media use variables were then entered as predictors of dating anxiety on the DAS. Approximately 54% were correctly classified, with 179 participants in the high dating anxiety group and 167 in the low group. The overall model was not significant, X^2 (8) = 4.998, p > .10. Data are presented in Table 11.

Predicting Internet use. To examine predictors of Internet use, binary logistic regression was conducted. Scores on the SPAI, DAS, and DAQ were entered as predictors of whether the participant had used email, chat rooms, IM, blogs, webcams, or online dating services to maintain the online relationship. None of the overall models were significant. Data are presented in Table 12.

Predicting relationship status. To examine predictors of relationship status, binary logistic regression was conducted. Scores on the SPAI, DAS, and DAQ were entered as predictors of whether the participant had ever been on a date. The overall model was significant X^2 (3) = 14.663, p < .01. Approximately 99% were correctly classified. Results indicated that individuals who were low on the DAQ (indicating higher levels of dating anxiety) were less likely to report ever having gone on a date, β= -.367, Wald = 11.481, OR = .693, 95% CI = .561-.857, p < .001. Additionally, the SPAI, DAS and DAQ were entered as predictors of whether the participant had been on a date in the last 6 months. The overall model was significant, X^2 (3) = 48.71, p < .001. Approximately 90% were correctly classified. Results indicated that individuals who were low on the DAQ were less likely to report going on a date in the last 6 months, β= -.204, Wald = 30.484,

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OR = .815, 95% CI = .758-.877, $p < .001$. Finally, the SPAI, DAS and DAQ were entered as predictors of whether a face to face meeting had taken place with the online relationship partner. The overall model was not significant, $X^2 (3) = 3.161$, $p > .10$. Data are presented in Table 13.

Discussion

This investigation into the use of the Internet by college students partially replicated and extended previous research. Results were similar to those of Donn and Sherman (2002), Knox et al. (2001), and Ward and Tracey (2004), with college students reporting using the Internet as a means to establish and maintain romantic and platonic relationships. This was one of the first studies to examine the association between social and dating anxiety and Internet use, as well as examine specific media that may be likely to be utilized in the development and retention of online relationships.

Social Anxiety

The majority of findings with respect to social anxiety severity were inconsistent with the hypotheses that individuals higher in social anxiety symptoms would report more use of the Internet and certain media to make and maintain relationships. Although individuals low in social anxiety reported using blogs significantly more than individuals who were high in social anxiety, use of webcams in relationship maintenance was almost 9 times more likely for those high in social anxiety. This may be due to an association between social anxiety and increased computer ability and interest, or be a result of the Internet acting as an intermediary between two individuals. Although communicating partners can see each other, there is a buffer of cyberspace between them and certain physiological characteristics (such as trembling or blushing) may not

be as easily noted. Given that the majority of the sample reported using both email and IM daily, it is not surprising that there were no differences with respect to social anxiety. Social anxiety symptoms were not found to be predictive of media use or relationship variables.

Dating Anxiety

Women and minorities were more likely to endorse symptoms of dating anxiety. Women may feel more pressure to be involved in a relationship than men. Sociobiological theory states that, since women can only have a limited number of offspring at one time, it is vital to couple with a partner that can provide stability and security for any offspring. Men, however, can have multiple partners and offspring, and are more likely to remain uncoupled longer (Gould, 1987). However, the racial difference may be a function of the location as the racial make-up of West Virginia University is such that minorities may have difficulty establishing dating relationships given the smaller amount of ethnic diversity on campus.

Again, the majority of findings regarding dating anxiety were inconsistent with the hypotheses. Individuals high in dating anxiety symptoms, as assessed by the Dating and Assertion Questionnaire, were 13 times more likely to endorse using webcams to maintain relationships. This, again, may be due to the Internet acting as a buffer.

Summary

The results of the current study extended previous literature, but were inconsistent with previous literature. Individuals who reported high levels of social and/or dating anxiety were not more likely to use the Internet to make online relationships than those who reported lower levels of social or dating anxiety. However,

the current investigation extended the literature by demonstrating that certain online media were more likely to be used by individuals reporting social and dating anxiety symptoms, particularly the use of web cameras. This was one of the first investigations to examine the association between particular online media and scores on established measures of social and dating anxiety.

Limitations and Future Directions

Limitations of this study should be noted. First, a university sample was used, which may have influenced not only the level of Internet use but also the level of technological ability. Future research may benefit from using a larger community sample, which contains a larger array of ages, backgrounds, and ability levels. A cross-sectional community sample may provide information on a larger range of ability, and thus be more ecologically valid. Second, the sample primarily consisted of European-American individuals. Although representative of the racial make-up of both West Virginia University and the state of West Virginia, future studies may benefit from inclusion of individuals from other ethnicities and racial backgrounds, as well as urban areas, to determine whether differences in computer use and dating exist. It is important to note, however, that the sample did include a range of individuals with significant symptoms of social anxiety disorder.

Additionally, the proportion of relationships made online to relationships in general was not clearly established. By understanding the base number of relationships a participant has versus the proportion of relationships made online, further analysis of level of social activity could be better understood. If a given participant stated that she/he had made three relationships online, and stated that they had 4 friends/romantic

partners total, it would be a valuable piece of information as to the participant's level of social activity.

Implications

The current investigation has several implications for intervention and identification of social and dating anxiety, as well as for dating relationships in general. The internet can be a vital tool for individuals living in areas where their particular racial/ethnic group, religion, or sexual orientation is not well represented. For individuals in remote or culturally homogenous areas, the Internet and online media can provide a link to similar others. Results suggest that individuals with social and/or dating anxiety are more likely to use the certain online media (i.e., web cameras) to make and maintain relationships. Given this finding, clinicians may want to consider using the Internet and certain online media as therapeutic tools for clients in need of exposure to social or relational situations. Clients presenting with social and/or dating anxiety can be assessed as to their level of computer and media knowledge, experience, and use, and then given access to controlled webcams or chat rooms in which they can practice skills and interpersonal tasks. By using online media as a low to mid-level step in an exposure hierarchy, clinicians may have another potential environment for clients to practice at home the skills they learn in therapy sessions. Furthermore, the Internet may be an ideal forum for discussions about social/dating anxiety symptoms and treatment, or even a potential outlet for group therapy. Individuals in group therapy may find it helpful to have online forums on which they can discuss coping skills, practice methods, and provide support to others. Though the ultimate goal remains having successful and appropriate live social interactions, clients who are starting from an extremely low

baseline may be served well by increasing any social interaction, live or in cyberspace.

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Table 1.

Demographic Characteristics of the Full Sample and Male and Female Participants

Characteristics	Full Sample n (%)	Female n (%)	Male n (%)
Race			
European American	623 (93.5%)	443 (93.9%)	180 (92.8%)
African American	17 (2.6%)	13 (2.8%)	4 (2.1%)
Hispanic/Latino	10 (1.5%)	10 (2.1%)	0 (0%)
Asian/Pacific Islander	8 (1.2%)	3 (0.6%)	5 (2.6%)
Other	8 (1.2%)	3 (0.6%)	5 (2.6%)
Sexual Orientation			
Heterosexual	646 (97%)	459 (97.2%)	187 (96.4%)
Homosexual	6 (1%)	1 (0.2%)	5 (2.6%)
Bisexual	11 (1.7%)	10 (2.1%)	1 (0.5%)
Other	3 (0.5%)	2 (0.4%)	1 (0.5%)
Age			
Mean	19.05	18.97	19.24
SD	1.20	1.14	1.32

Table 2.

Computer Use Statistics of the Full Sample and Male and Female Participants

Online Media	Full Sample n (%)	Female n (%)	Male n (%)
Chat Room	520 (78.1%)	361 (76.5%)	159 (82%)
Instant Messaging	663 (99.5%)	471 (99.8%)	192 (99%)
Web Log (BLOG)	322 (48.3%)	231 (48.9%)	91 (46.9%)
Web Camera (Webcam)	310 (46.5%)	191 (40.5%)	119 (61.3%)
Online Dating Service	87 (13.1%)	53 (11.2%)	34 (17.5%)

Table 3.

Intercorrelation Matrix of Demographic Variables Between High and Low Social Anxiety Groups

Variable	Sexual Orientation		Race/Ethnicity		Year in School	
	High	Low	High	Low	High	Low
Gender	.00	-.00	.10	.08	-.02	-.01
Sexual Orientation			.24**	.07	-.10	-.11
Race/Ethnicity					.10	-.05

Note. **$p < .01$

Table 4.

Intercorrelation Matrix of Computer Use Variables (Media used to maintain online relationship) Between High and Low Social Anxiety Groups

Variable	Chat Rooms		IM		Blogs		Webcams		Dating Site	
	High	Low	High	Low	High	Low	High	Low	High	Low
Email	.39**[a]	.11[a]	.55**[a]	.47**[a]	.20**	-.03	.19**[a]	.39**[a]	.12	.19**
Chat Rooms			.24**	.11	.07	-.02	.24**	.18*	-.03	-.02
IM					.24**	.10	.12	.20*	.03	.10
Blogs							.20**[a]	-.01[a]	-.04	-.01
Webcams									-.02[a]	.50**[a]

Note. **$p < .01$, * $p < .05$; [a] = statistically significant difference between high and low groups

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Table 5.

Intercorrelation Matrix of Relationship Variables and Social/Dating Anxiety Measures Between High and Low Social Anxiety Groups

Variable	Been on a date in last 6 months		Have significant other		SPAI score		DAS score		DAQ score		Made online relationship	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Ever been on a date	.36**a	-.02a	.10	-.06	-.40	.06	-.41	.10	-.21**a	-.07a	.03	.05
Been on date in last 6 months			.35**a	.13a	.15**	.07	.05	.00	-.38**a	-.01a	-.04	.13
Have signif. other					.01	-.10	.07	-.03	-.08	-.00	-.12	-.05
SPAI score							.31**a	.06a	-.20**a	.35**a	-.04	.07
DAS score									-.15	-.20**	-.01a	-.24**a
DAQ score											.05	-.00

Note. **$p < .01$, * $p < .05$; SPAI = Social Phobia and Anxiety Inventory; DAS = Dating Anxiety Survey; DAQ = Dating and Assertion Questionnaire; [a] = statistically significant difference between high and low groups

Table 6.

Intercorrelation Matrix of Demographic Variables and Computer Use Variables (Media used to maintain online relationship) Between High and Low Social Anxiety Groups

Variable	Gender		Sexual Orientation		Race/Ethnicity		Year in School	
	High	Low	High	Low	High	Low	High	Low
Email	-.00	-.11	.01	-.08	-.01	.03	-.02	.14
Chat Rooms	.07	.05	.03	-.12	-.07	.05	-.08	.05
IM	-.11	.10	-.00	-.07	.01	.04	-.07	.19*
Blogs	-.08	.05	.04	.02	-.08	.02	.02	-.03
Webcams	-.05	-.08	.02	-.16**	.02	-.12	-.01	.09
Dating Sites	.11	.05	.03[a]	-.37**[a]	.04	-.29	-.21**	-.03

Note. **$p < .01$, * $p < .05$; [a] = statistically significant difference between high and low groups

Table 7.

Intercorrelation Matrix of Relationship Variables, Social/Dating Anxiety Measures, and Demographic Variables Between High and Low Social Anxiety Groups

Variable	Gender		Sexual Orientation		Race/Ethnicity		Year in school	
	High	Low	High	Low	High	Low	High	Low
Ever been on a date	-.01	-.05	-.02	-.02	.02	-.02	-.06	.03
Been on date in last 6 months	.03	.10	.05	.17*	.04	.08	-.02	-.01
Have significant other	.16*	.08	.00	-.08	.07	-.09	-.12	.05
Made online relationship	-.08	.12	-.10	-.12	-.07	-.06	-.08	.11
SPAI score	-.03	.15	.03	-.03	.21**	.06	.04	.06
DAS score	-.16*	-.08	-.10	.02	-.10	.01	.02	.05
DAQ score	.17*	.06	-.02	.05	-.07	.00	.01	.06

Note. **$p < .01$, *$p < .05$

Table 8.

Intercorrelation Matrix of Relationship Variables, Social/Dating Anxiety Measures, and Computer Use Variables (Media used to maintain online relationship)

Variable	Email		Chat Rooms		IM		Blogs		Webcams		Dating Sites	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Ever been on a date	-.02	.03	.03	.02	.04	.07	.03	.01	.01	.01	.02	.01
Been on date in last 6 months	-.01	.08	-.07	.04	.01	.16*	.03	.02	.04	.03	.07	.02
Have significant other	.05	-.11	-.04	.08	-.08	-.15	.02	.06	.08	.03	-.09	.06
Made online relationship	.41**	.28**	.27**	.23**	.64**	.71**	.23**	.12	.14	.07	.24**	.12
SPAI score	-.08	.08	-.11	-.09	.02	.15	.05	.17*	.00	.03	.05	-.06
DAS score	-.04	.00	-.06	-.09	.09^a	-.17*^{a}	-.03	.12	-.08	-.01	-.01	-.03
DAQ score	.03	-.04	.04	.07	-.08	-.08	-.01	-.17*	-.15*	-.06	.02	-.02

Note. **p < .01, * p < .05; [a] = statistically significant difference between high and low groups

Table 9.

Logistic Regression Results for SPAI score as Dependent Variable

Predictor	β	Wald	*p*	OR
Group 1: $X^2(4)$ = 4.432				
Demographics				
Gender	.08	.12	.73	1.09
Race	.10	.25	.62	1.10
Sexual Orientation	-.17	.73	.39	.90
Year in School	.21	2.90	.09	1.23
Group 2: $X^2(1)$= .488				
Made Online Relationship	-.18	.49	.49	.83
Group 2: $X^2(8)$=20.043*				
Maintain relationship				
Email	-.70	3.55	.06	.50
Chat Room	.12	.04	.85	1.12
IM	.62	3.63	.06	1.84
Blog	-2.39	4.63	.03*	.09
Webcam	2.18	4.07	.04*	8.85
Online Dating Service	-1.52	1.46	.23	.22
Telephone	-.56	2.52	.11	.57
Letter (Snail Mail)	.11	.04	.84	1.12

Note. *p < .05; SPAI = Social Phobia and Anxiety Inventory.

Table 10.

Logistic Regression Results for DAQ score as Dependent Variable

Predictor	β	Wald	*p*	OR
Group 1: $X^2(4)= 18.71$***				
Demographics				
Gender	-.76	9.97	.00***	.47
Race	.49	5.88	.02*	1.63
Sexual Orientation	-.20	.93	.34	.82
Year in School	-.18	1.95	.16	.84
Group 2: $X^2(1) = 2.85$				
Made Online	-.406	2.83	.09	.67
Relationship				
Group 3: $X^2(8) = 15.79$				
Maintain relationship				
Email	-.59	2.40	.12	.56
Chat Room	-1.25	3.07	.08	.29
IM	.24	.58	.45	1.27
Blog	-1.13	1.82	.18	.32
Webcam	2.60	4.84	.03*	13.40
Online Dating Service	-1.02	.96	.33	.36
Telephone	.15	.17	.68	1.16
Letter (Snail Mail)	.03	.00	.96	1.03

Note. ***p < .0001, **p < .01, *p < .05; DAQ = Dating and Assertion Questionnaire.

Table 11.

Logistic Regression Results for DAS score as Dependent Variable

Predictor	β	Wald	*p*	OR
Group 1: $X^2(4) = 13.50^{**}$				
Demographics				
Gender	-.88	11.99	.00***	.42
Race	-.31	1.16	.28	.74
Sexual Orientation	.05	.19	.67	1.06
Year in School	.09	.18	.67	1.09
Group 2: $X^2(1) = 2.88$				
Made Online Relationship	-.42	2.84	.09	.66
Group 3: $X^2(8) = 5.00$				
Maintain relationship				
Email	-.11	.10	.75	.89
Chat Room	-.72	1.16	.28	.49
IM	.21	.45	.50	1.23
Blog	-1.64	2.17	.14	.19
Webcam	.13	.02	.90	1.14
Online Dating Service	-.62	.24	.62	.54
Telephone	-.11	.11	.74	.89
Letter (Snail Mail)	.27	.25	.62	1.31

Note. **$p< .01$, ***$p < .001$; DAS = Dating Anxiety Survey.

Table 12.

Logistic Regression Results for Online Media as Dependent Variables

Predictor	β	Wald	P	OR
Email: $X^2(3) = .23$				
SPAI	-.01	2.34	.13	.99
DAQ	.00	.02	.88	1.00
DAS	-.00	.14	.71	1.00
Chat room: $X^2(3) = .61$				
SPAI	-.00	.04	.85	1.00
DAQ	.04	.50	.48	1.04
DAS	-.01	.48	.49	.99
IM: $X^2(3) = .50$				
SPAI	.00	.15	.70	1.00
DAQ	-.02	.59	.44	.98
DAS	-.01	1.82	.18	1.00
Blog: $X^2(3) = .19$				
SPAI	-.02	3.39	.07	.98
DAQ	-.03	.21	.65	.97
DAS	-.01	.17	.68	1.00
Web Camera: $X^2(3) = 3.53$				
SPAI	.00	.05	.83	1.00
DAQ	-.13	2.64	.10	.88
DAS	-.00	.00	.96	1.00
Online Dating Service:				
$X^2(3) = .46$	-.02	1.13	.29	.98
SPAI	.05	.33	.57	1.05
DAQ	.00	.00	1.00	1.00
DAS				

Note. SPAI = Social Phobia and Anxiety Inventory; DAS = Dating Anxiety Survey; DAQ = Dating and Assertion Questionnaire.

Table 13.

Logistic Regression Results for Relationship Status as Dependent Variables

Predictor	β	Wald	*p*	OR
Ever been on a date: $X^2(3) = 14.66*$				
SPAI	-.02	.72	.40	.98
DAQ	-.37	11.48	.00***	.69
DAS	.02	.69	.41	1.02
Date in last 6 months: $X^2(3) = 48.71***$				
SPAI	.01	.60	.44	1.01
DAQ	-.20	30.48	.00***	.82
DAS	.00	.00	.99	1.00
Face-to-face meeting: $X^2(3) = 3.16$				
SPAI	-.03	1.58	.21	.97
DAQ	-.00	.69	.41	1.00
DAS	-.00	1.70	.30	1.00

Note. * *p* < .05, ****p* < .001; SPAI = Social Phobia and Anxiety Inventory; DAS = Dating Anxiety Survey; DAQ = Dating and Assertion Questionnaire.

Table 14.

Summary of Findings

Hypotheses   Findings

Dating Practices	**Dating Practices**
Low-Anxiety > High Social/Dating Anxiety	Dating Anxiety (DAQ) less likely to have ever been on a date ($p < .001$) or to have been on a date in the last 6 months ($p < .001$).
Use of Internet to Make/Maintain Relationships	**Use of Internet to Make/Maintain Relationships**
High Social/Dating Anxiety > Low Anxiety	No differences between groups
Type of Media Used	**Type of Media Used**
Less personal (Email, Chat, IM):	Social Anxiety > Webcam
High Social/Dating Anxiety > Low Anxiety	Social Anxiety < Blog
More Personal (Blog, Webcam, Dating Site):	Dating Anxiety > Webcam
High Social/Dating Anxiety < Low Anxiety	
Face-to-Face Meeting	**Face-To-Face Meeting**
High Social/Dating Anxiety < Low Anxiety	No difference between groups or severity

Appendix A

Demographic Questionnaire

1) Date Questionnaire Completed: (MM/DD/YR)			
2) Gender:	Female		Male
3) Date of Birth: (MM/DD/YR)		4) Age:	
5)Sexual Orientation:			
Heterosexual	Gay	Lesbian	Bi-Sexual
6) Year in School:			
Freshman	Sophomore	Junior	Senior
7) Race/Ethnicity:			

White	African-American	Hispanic/Latino	Asian/Pacific Islander	Biracial/Other

Appendix B

Computer/Internet Use Questionnaire

Instructions: The following questions deal with your computer and Internet use. Read each question and choose the best answer or answers.

1) Do you own a computer?   Yes   No

2) Do you have Internet access?   Yes   No

3) How much time do you spend on the Internet daily?

| Less than 1 hour | 1 to 3 hours | 3 to 5 hours | 5 to 7 hours | Greater than 7 hours |

4) How experienced are you with using the Internet?

| Very Inexperienced | Somewhat Inexperienced | Unsure | Somewhat Experienced | Very Experienced |

5) How comfortable/at ease are you with using the Internet?

| Very Uncomfortable | Somewhat Uncomfortable | Unsure | Somewhat Comfortable | Very Comfortable |

6) Have you ever used electronic mail (e-mail)?   Yes   No

7) How often do you check, or send electronic mail (e-mail)?

| Every three months | Every month | Every week | Every day | Multiple times a day |

8) How experienced are you with checking, sending or receiving e-mail?

| Very Inexperienced | Somewhat Inexperienced | Unsure | Somewhat Experienced | Very Experienced |

9) How comfortable/at ease are you with using e-mail?

| Very Uncomfortable | Somewhat Uncomfortable | Unsure | Somewhat Comfortable | Very Comfortable |

10) Have you ever participated in a chat room?   Yes   No

11) How often do you participate in chat rooms?

| Every three months | Every month | Every week | Every day | Multiple times a day |

12) How experienced are you with chat room participation?

| Very Inexperienced | Somewhat Inexperienced | Unsure | Somewhat Experienced | Very Experienced |

13) How comfortable are you with chat room participation?

| Very Uncomfortable | Somewhat Uncomfortable | Unsure | Somewhat Comfortable | Very Comfortable |

14) Have you ever used instant messaging (IM)?   Yes   No

15) How often do you use instant messaging (IM)?

| Every three months | Every month | Every week | Every day | Multiple times a day |

16) How experienced are you with using instant messaging (IM)?

| Very Inexperienced | Somewhat Inexperienced | Unsure | Somewhat Experienced | Very Experienced |

17) How comfortable are you with using instant messaging (IM)?

| Very Uncomfortable | Somewhat Uncomfortable | Unsure | Somewhat Comfortable | Very Comfortable |

18) Have you ever created or read web logs (blogs)?   Yes   No

19) How often do you create, update, or read web logs (blogs)?

| Every three months | Every month | Every week | Every day | Multiple times a day |

20) How experienced are you with creating, updating or reading web logs (blogs)?

Very Inexperienced	Somewhat Inexperienced	Unsure	Somewhat Experienced	Very Experienced

21) How comfortable are you with creating, using, or reading web logs (blogs)?

Very Uncomfortable	Somewhat Uncomfortable	Unsure	Somewhat Comfortable	Very Comfortable

22) Have you ever used or watched a web camera (web cam)?   Yes   No

23) How often do you use or watch web camera (web cam) broadcasts?

Every three months	Every month	Every week	Every day	Multiple times a day

24) How experienced are you with using or watching web camera (web cam) broadcasts?

Very Inexperienced	Somewhat Inexperienced	Unsure	Somewhat Experienced	Very Experienced

25) How comfortable are you using or watching web camera (web cam) broadcasts?

Very Uncomfortable	Somewhat Uncomfortable	Unsure	Somewhat Comfortable	Very Comfortable

26) Have you ever read, made, or updated an ad on an online dating service (e.g., Match.com, Yahoo! Personals)   Yes   No

27) How often do you read, make, or responding to an ad on an online dating service?

Every three months	Every month	Every week	Every day	Multiple times a day

28) How experienced are you with reading, making, or responding to an ad on an online dating service?

Very Inexperienced	Somewhat Inexperienced	Unsure	Somewhat Experienced	Very Experienced

29) How comfortable are you with reading, making, or responding to an ad on an online dating service?

Very Uncomfortable	Somewhat Uncomfortable	Unsure	Somewhat Comfortable	Very Comfortable

30) Have you ever made an online relationship (One in which you meet online before you meet face-to-face)?   Yes   No

31) How many online relationships have you made? _____

32) What was the ultimate goal of forming these online relationships?

Acquaintance	Friend	Close or Best Friend	Romantic partner

32) Of all the relationships you have formed online, what is the most common nature of the relationships?

Acquaintance	Friend	Close or Best Friend	Romantic partner

33) Think of the closest online relationship you have made to date. What was the nature of this relationship?

Acquaintance	Friend	Close or Best Friend	Romantic partner

34) Did a face-to-face meeting result from this online relationship?   Yes   No

35) Compared to traditional face-to-face relationships, how quickly did the online relationship develop in terms of intimacy?

Slower than traditional	Same as traditional	Faster than traditional

36) How did you meet the person with whom you have/had the closest online relationship?

Chat room   Instant messaging   Web Log   Web Cam   Online dating service

37) What online media did you use to maintain the closest relationship? (Circle all that apply)

E-Mail   Chat rooms   IM   Blogs   Web Cams   Online dating services

38) What media was used most to maintain this relationship?

E-Mail   Chat rooms   IM   Blogs   Web Cams   Online dating services

39) Did you speak to the person with whom you had an online relationship on the telephone?   Yes   No

40) Did you write letters (snail mail) to the person with whom you had/have an online relationship?   Yes   No

Appendix C

Friendship and Dating Practices Questionnaire

Instructions: The following questions deal with your current dating and friendship practices. Read each question and choose the best answer or answers.

1) Have you ever been on a date?		Yes	No
2) Have you been on a date in the last 6 months?		Yes	No
3) Do you have a significant other? (i.e., boyfriend/girlfriend)		Yes	No

4) How long have you been dating/in a relationship with your significant other?				
Less than 6 months	6 to 12 months	1 to 3 years	3 to 5 years	5 or more years

5) How did you meet your significant other?				
In high school class	In college class	Introduced by Mutual Friend	Met Online	Met at a bar/club
Were friends before	Part of the same group	Gym/Outdoor activities	Club/Organization	Church/Synagogue

6) What do you consider a "date"? (Circle all that apply)				
One on one outing (dinner, movie, etc.)	One on one staying in (rent video, "hang out")	Group outing with significant other and family	Group outing with significant other and friends	Group outing with significant other and acquaintances

7) What is the most common type of date you go on?				
One on one outing (dinner, movie, etc.)	One on one staying in (rent video, "hang out")	Group outing with significant other and family	Group outing with significant other and friends	Group outing with significant other and acquaintances

8) When you have gone on a first date, what is the most common type of date?				
One on one outing (dinner, movie, etc.)	One on one staying in (rent video,	Group outing with significant other and	Group outing with significant other and friends	Group outing with significant other and acquaintances

	"hang out")	family		
9) Do you have a best or closest friend?			Yes	No
10) How long have you known your best or closest friend?				
Less than 6 months	6 to 12 months	1 to 3 years	3 to 5 years	5 or more years
11) How did you meet your best or closest friend?				
In high school class	In college class	Introduced by Mutual Friend	Met Online	Met at a bar/club
Parents were/are friends	Part of the same group	Gym/Outdoor activities	Club/Organization	Church/Synagogue

It's Appendix D, a Dating Anxiety Survey.

Dating Anxiety Survey

Instructions: For each item below, consider the target person (dating possibility/DP) to be of the gender you would date (i.e., a guy if you are a straight female or a gay male; a girl if you are a lesbian or a straight male; your preferred gender if bi-sexual)

Rate the following situations on the amount of anxiety you feel on a scale from 1 (Least Anxious) to 7 (Most Anxious).

	Least Anxious						Most Anxious
1) Just being around a particularly good looking DP.	1	2	3	4	5	6	7
2) Carrying on a conversation initiated by a DP on campus.	1	2	3	4	5	6	7
3) Talking with some DP you have known for some time.	1	2	3	4	5	6	7
4) Initiating a conversation with a DP from one of your classes whom you see on campus.	1	2	3	4	5	6	7
5) Sitting next to a DP in class by your choice of seats.	1	2	3	4	5	6	7
6) Being introduced to a new DP at a party while with a group of your friends.	1	2	3	4	5	6	7
7) Being introduced to a new DP while with a group of your friends.	1	2	3	4	5	6	7
8) Talking to a DP with a group of male and female friends.	1	2	3	4	5	6	7
9) Calling up a DP about some classwork.	1	2	3	4	5	6	7
10) Calling up a DP just to talk.							

	1	2	3	4	5	6	7
11) Asking a DP to have a cup of coffee with you after class.	1	2	3	4	5	6	7
12) Starting a conversation with a DP whom you have never met before in a dorm lounge or cafeteria.	1	2	3	4	5	6	7
13) Asking a DP to go to a party with you.	1	2	3	4	5	6	7
14) Beginning a conversation with an attractive DP whom you would like to date.	1	2	3	4	5	6	7
15) While talking to a DP you like, trying to communicate that you would like to go out with him.	1	2	3	4	5	6	7
16) The setting up of a date.	1	2	3	4	5	6	7
17) The initial meeting for the date.	1	2	3	4	5	6	7
18) The first few minutes of conversation on the date.	1	2	3	4	5	6	7
19) Carrying on the conversation throughout the date.	1	2	3	4	5	6	7
20) Trying to make a good impression while on the date.	1	2	3	4	5	6	7
21) Trying not to discern whether or not your date likes you.	1	2	3	4	5	6	7
22) First kiss with your date.	1	2	3	4	5	6	7
23) Kissing goodnight at the end of a date.	1	2	3	4	5	6	7

DP = Dating Possibility

Appendix E

The Dating and Assertion Questionnaire

Instructions: For each item below, consider the target person (dating possibility/DP) to be of the gender you would date (i.e., a guy if you are a straight female or a gay male; a girl if you are a lesbian or a straight male; your preferred gender if bi-sexual)

We are interested in finding out something about the likelihood of your acting in certain ways. Below you may find a list of specific behaviors you may or may not exhibit. Use the following rating scale:

1 = I never do this
2 = I sometimes do this
3 = I often do this
4 = I do this almost always

Now after each of the items on the following list, circle one of the numbers from 1 to 4 which best indicates the likelihood of your behaving in that way. Be as objective as possible.

1) Maintain a long conversation with a DP.			
1	2	3	4
2) Get a second date with someone you have dated once.			
1	2	3	4
3) Be able to accurately sense how a DP feels about you.			
1	2	3	4
4) Have an intimate relationship with a DP.			
1	2	3	4
5) Have an intimate physical relationship with a DP.			
1	2	3	4

DP = Dating Possibility

The following questions describe a variety of social situations that you might encounter. In each situation you may feel "put on the spot." Some situations may be familiar to you, and others may not. We'd like you to read each situation and try to imagine yourself actually in the situation. The more vividly you get a mental picture and place yourself into the situation, the better.

After each situation, circle one of the numbers from 1 to 5 which best describes you using the following scale.

1 = I would be so uncomfortable and so unable to handle the situation that I would avoid it if possible.
2 = I would feel very uncomfortable and would have a lot of difficulty handling this situation.
3 = I would feel somewhat uncomfortable and would have some difficulty handling this situation.
4 = I would feel quite comfortable and would be able to handle this situation fairly well.
5 = I would feel quite comfortable and would be able to handle this situation very well.

1) You have enjoyed this date and would like to see your date again. The evening is coming to a close and you decide to say something.				
1	2	3	4	5
2) You meet someone you don't know but are attracted to. You want to ask them out for a date.				
1	2	3	4	5
3) You meet a DP at lunch and have a very enjoyable conversation.				
1	2	3	4	5
4) You go to a party where you don't know many people. A DP approaches you and introduces themselves. You want to start a conversation and get to know him/her.				
1	2	3	4	5

DP = Dating Possibility