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Lost in a Crowded Room: A Correlational Study of Facebook & Social Anxiety



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Introduction

Social Phobia is a frequently disabling condition characterized by fear of embarrassment and judgment in social and/or performance situations that manifests in different ways.¹ Individuals may avoid very specific tasks, such as public speaking or engaging in motor behaviors, such as eating, drinking, or writing, in the presence of others. Additionally, these individuals may fear overt, physiological “clues” to their anxiety, including blushing, stammering, or trembling. Avoidance of these social and performance situations often leads to impairment in occupational and social settings, negatively impacting the individual. Such fear and impairment leads to marked distress in these individuals as they withdraw from social and occupational settings.²

With the advent of the internet and social networking sites, individuals with social phobia now have a method by which to avoid face-to-face communication while still interacting with others. Communication done via computer allows the individual more control over the situation than face-to-face communication. For example, individuals can slow conversation, allowing them to think through, edit, and delete thoughts if desired. They can get up and leave the computer (and thus the conversation) if they wish. Additionally, overt physiological symptoms of blushing, sweating, trembling, and voice quivering are safely hidden from view.²

A social networking site is a website that allows individuals to create a profile and a list of other users (“friends”) with whom to converse and share

¹ Turk, C. L., Heimberg, R. G., & Hope, D. A. (2003). Social anxiety disorder. In D. Barlow (Ed.) *Clinical handbook of psychological disorders: A step-by-step treatment manual*, Third edition, (pp. 114-153). New York: The Guilford Press.

² Schulz, S. M., Meuret, A. E., Loh, R., & Hofmann, S. G. (2007). Social Phobia. In M. Hersen and J. C. Thomas (Eds.) *Handbook of clinical interviewing with adults*, First edition, (pp.223-237). Los Angeles: SAGE Publications.

information.³ In 2004, Mark Zuckerberg, a Harvard University student, created Facebook, a social networking site that allowed students to connect with their peers.⁴ By 2006, the social networking site was extended beyond students to include anyone over the age of 13 with an email address. On Facebook, an individual's profile has a predetermined layout that includes a picture of the individual, a "wall" on which friends may post comments, weblinks, a list of the individual's friends, and photos that either the individual or his or her friends have posted. The user can determine privacy of his or her profile, thus limiting it to only friends or leaving it public. Currently, the site boasts over 400 million active users, with an average of 500 billion minutes spent on the site per month.

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Facebook's tremendous popularity has prompted researchers to study the appeal of social networking. Recent studies have focused upon topics ranging from broad characteristics of the typical site user to the use of these sites in the treatment of mental illness. One area that has gained some attention is the *rich-get-richer* hypothesis, which states that those who are extroverted are most likely to benefit from social networking sites.⁵ Thus far, there have been mixed findings with respect to this hypothesis leading to declarations that these sites are both helpful and hindering.^{6 7}

The current study will examine the relationship between Facebook use and social anxiety. More specifically, there are two hypotheses. First, it is hypothesized that there will be a significant, positive relationship between time spent on Facebook and scores on a social anxiety scale. Secondly, it is hypothesized that scores on this measure will have a significant, positive relationship with individuals who find online communication easier. This item will be coded such that higher scores will denote the degree to which online communication is easier than face-to-face communication. In sum, it is hypothesized that as time spent on Facebook increases, and perceived ease of online communication increases, social anxiety scores will also increase.

³ Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), article 11.

⁴ Facebook, 2010

⁵ Sheldon, P. (2008). The relationship between unwillingness-to-communicate and students' Facebook use. *Journal of Media Psychology*, 20(2), 67-75.

⁶ Baker, J. R., & Moore, S. M. (2008). Blogging as a social tool: A psychosocial examination of the effects of blogging. *Cyberpsychology & Behavior*, 11(6), 747-749.

⁷ Kramer, N. C., & Winter, S. (2008). Impression management 2.0: The relationship of self-esteem, extraversion, self-efficacy, and self-presentation within social networking sites. *Journal of Media Psychology*, 20(3), 106-116.

Method

- Participants

Participants within the present study were recruited using flyers, email, and posts on the primary researcher's personal Facebook page. Individuals completed the online survey using SurveyMonkey and were presented with a copy of Informed Consent explaining their rights as a participant. Participation was voluntary and participants were able to exit the survey at any time. No compensation was provided for participation. Participants indicated they were over 18 years of age and had a Facebook account. A total of 388 surveys were completed and analyzed.

- Measures

Within the present study, the following assessments were presented to each research participant:

Social Anxiety. The Liebowitz Social Anxiety Scale, Self-Report (LSAS) – a 48-item questionnaire – was utilized as a measure to assess 4 subcategories: performance fear, social fear, performance avoidance, and social avoidance. Additionally, the scale provides scores related to social interaction fear and avoidance, and public performance fear and avoidance. The participants were first asked to rate their fear or anxiety on 24 items on a 4-point Likert-type scale: none, mild, moderate, or severe. Participants were then instructed to rate their avoidance on 24 items using a 4-point Likert-type scale: never, occasionally (1 - 33%), often (33 - 67%), or usually (67% - 100%). A fear/anxiety score, avoidance score, social score, performance score, and total social anxiety score were then calculated.

Facebook Use. Because an assessment of Facebook use is currently not available, and given the exploratory nature of the study, the researchers created an 18-item questionnaire on basic Facebook use. Items included estimating one's number of friends, identifying uses for Facebook, and estimating time spent on Facebook. A score was coded for each item. For the purposes of the research, two items were analyzed: time spent on Facebook and ease of online communication.

Demographic Questionnaire. Participants provided standard demographic information including sex, age, ethnicity, and current marital status.

Results

A total of 388 surveys were completed. Of these, 74.4% were female, 25.4% were male, and 1 individual chose the option “would rather not say.” With regard to ethnicity, 85.9% identified as Caucasian, 6.9% as Asian American, 2.6% as “other,” 1.8% as multiracial, 1.3% as Hispanic, 0.8% as “would rather not say,” 0.5% as American Indian/Alaskan Native, and 0.3% as Pacific Islander/Native Hawaiian. African American was included as an option, but was not endorsed. The average age of participants was 29 years ($M = 29.42$, $SD = 8.43$), with a range of 20 to 60 years of age. The majority of participants were single (47.3%), while 27.7% were married, 19.0% were cohabitating, 3.6% were divorced, 1.3% marked “would rather not say,” and 1.0% were separated. Widowed was offered as an option, but was not endorsed.

The researchers were interested in determining if a significant relationship existed between social anxiety scores and Facebook use. Specifically, researchers compared scores on the Liebowitz Social Anxiety Scale (total social anxiety, total social avoidance, total performance anxiety, total performance avoidance, and overall anxiety total), with time spent on Facebook and with ease of online communication. There were two hypotheses: (1) a significant, positive relationship between time spent on Facebook and scores on the Liebowitz Social Anxiety Scale (LSAS), and (2) a significant, positive relationship between ease of online communication and scores on the LSAS.

For the first hypothesis, variables were analyzed using Pearson product moment correlations. Data was collected from 388 completed surveys. Using the Bonferroni approach to control for Type I error across the 5 correlations, a p value of less than .01 (.05/5) was required for significance. The results of the correlational analyses indicated that two of five correlations were statistically significant. There was a significant, positive relationship found between time spent on Facebook and total performance avoidance, $r(388) = .153$. This indicates that time spent on Facebook and performance avoidance vary together. A significant, positive relationship was also found between time spent on Facebook and overall LSAS total, $r(388) = .132$, indicating that these two variables vary together. Relationships between time spent on Facebook and social anxiety, social avoidance, and performance anxiety were not found to be significant.

For the second hypothesis, variables were analyzed using Pearson product moment correlations. Data was collected from 388 completed surveys. Using the Bonferroni approach to control for Type I error across the 5 correlations, a p value of less than .01 (.05/5) was required for significance. The results of the correlational analyses indicated that five of five correlations were statistically significant. There was a significant, positive relationship between ease of online

communication and overall LSAS total, $r(388) = .343$, indicating that these two variables vary together. A significant, positive relationship was also found between ease of online communication and social anxiety, $r(388) = .351$. Additionally, a significant, positive relationship was found between ease of online communication and social avoidance, $r(388) = .338$. A significant, positive relationship was found between ease of online communication and performance anxiety, $r(388) = .285$. Finally, a significant, positive relationship was found between ease of online communication and performance avoidance, $r(388) = .275$.

Discussion

The researcher sought to determine if a significant relationship existed between time spent on Facebook and social anxiety, as well as perceived ease of online communication and social anxiety. Indeed, significant, positive relationships were found for each hypothesis. However, the direction of each relationship is unknown. More specifically, the research does not reveal if Facebook use leads to greater social anxiety, or conversely, if social anxiety leads to increased Facebook use. Furthermore, due to the correlational nature of the study, it is unknown if a causal relationship exists and to what extent.

This study sought to build on previous research and offer an interesting look into Facebook use. According to Experian Hitwise, an online intelligence service, Facebook was the most visited website in 2010, ousting Google.com from the top spot, and these numbers are predicted to increase.⁸ With use of the popular site Szymanski on the rise, it has and will continue to have an effect on people's lives, especially those who have difficulty communicating face-to-face. This study shows that there is in fact a relationship between social anxiety and Facebook use.

As the researcher created the Facebook measure in collaboration with her advisor, the statistical properties are unknown. The measure did not undergo screening, nor was a panel employed to address potential questions or inconsistencies. Additionally, reading level of the questions was not formally addressed. Content of the questions was determined solely by the researcher to address specific research questions. A measure to assess use of social networking sites would lead to increased understanding of the impacts of site use and thus add to the field's knowledge.

Due to the limited scope of the study, some information remains unknown. For example, dual diagnoses were not addressed. While the LSAS assesses for social anxiety and avoidance, the researcher did not address additional diagnoses (e.g. Generalized Anxiety Disorder, Specific Phobia, Avoidant Personality Disorder)

⁸ Hitwise.com, 2011

that may have confounded the data. In addition, the researcher did not query past or present use of anti-anxiety medications, or participation in individual or group therapies. Such information could have created a more complete picture of individuals' experience of anxiety. Additionally, participant geographic location is unknown. In order to obtain subjects, the researcher recruited through email to her graduate program, fliers posted in the greater Portland area, and an advertisement on the researcher's personal Facebook page; as such, the sample may not be representative of the general population. While the demographic questionnaire assessed ethnicity, the researcher did not query the participant's state or national citizenship. A future study might assess correlations among demographics (e.g. age, ethnicity, gender, and nationality), social anxiety, and use of social networking sites.

As the study was conducted via online survey, it is reliant on the participant's perception of social networking site use, as well as the participant's rating of his/her subjective experience of social anxiety and avoidance (i.e. lack of corroboration of the severity of anxiety with friends or family members).

While many facets of social networking sites as they relate to social anxiety remain unknown, it is clear that a significant, positive relationship exists between social anxiety and both use of these sites and perceived ease of online communication. It will be critical for those studying the phenomenon of social anxiety and internet-based trends to research social networking sites and their effects in order to comprehend and competently treat the disorder.