Social Anxiety, Internet Use, and Facebook

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Abstract

The current study investigated the relationship between social anxiety, internet use, and Facebook (FB) use. Results indicate that individuals higher in social anxiety reported increased internet use, as well as reporting using the internet as avoidance of face-to-face interactions. These individuals also reported higher FB importance, but not higher FB use. Implications are discussed.

Introduction

- Individuals higher in social anxiety may use the internet to avoid face-to-face interactions (Erwin et al., 2004)
  - May exacerbate isolation and social interaction anxiety
- Using the internet for *social* purposes may have positive effects
  - Decreased loneliness, increased self-esteem and social support (Shaw & Grant, 2002)
- Facebook has become the most widely used online social networking site (Hitwise, 2010)
  - Has been linked to both positive (e.g., increased self-esteem; Ellison, Steinfield, & Lampe, 2007) and negative (e.g., poor academic performance; Hsu, 2009) outcomes
  - Greater Facebook use has been associated with shyness, a construct related to social anxiety (Orr et al., 2009)
- Purpose of current study is to further explore the relationships between internet usage generally, and to make a novel *specific* measure of Facebook usage and test the relationship between social anxiety and Facebook usage

Hypotheses

1. Individuals higher in SA will report increased internet/Facebook use compared to those lower in SA

2. Individuals higher in SA will report using the internet specifically as a substitute for face-to-face interactions

Measures

Internet Usage Questionnaire (IUQ)

- Originally a 30-item measure employing a 1 to 7 Likert-type scale
- Assesses internet usage (8 items; $\alpha = .76$) and internet experiences (21 items)
- Items derived in part from the Temple University Internet Assessment Package (Erwin et al., 2004)

Facebook Questionnaire (FQ)

- Originally a 59-item measure employing a 1 to 7 Likert-type scale
  - 37 items not used in current study
- Assesses Facebook usage (1 item), and Facebook experiences (21 items)

Straightforward Social Interaction Anxiety Scale
(S-SIAS; Mattick & Clarke, 1998; Rodebaugh et al., 2007)

- A 20-item measure assessing anxiety in a variety of social interaction situations
- Internal consistency for straightforward items was excellent in the current sample ($\alpha = .93$)

Sample

635 undergraduate participants
- **Age:** $M = 19$ years
- **Gender:** 65% women
- **Ethnicity:** White ($n = 567$; 89%)
- **Social Anxiety range** (S-SIAS score): 0-63

Methods

- 635 participants completed the IUQ, FQ, and SIAS
- EFA was conducted on a random half of the sample, followed by a CFA on the second random half
  - IUQ: EFA and CFA only included the 21 items assessing internet experiences; internet usage was treated as a total
  - FQ: EFA and CFA only included the 21 items assessing Facebook experiences; Facebook usage was a single item

Results: Internet Usage Questionnaire

- EFA suggested a two-factor solution
- CFA showed excellent fit of two-factor solution (CFI = .981, TLI = .976, RMSEA = .039, SRMR = .033)
  - internet use as positive substitute for face-to-face interactions (4 items; $\alpha = .81$)
  - internet use as avoidance of face-to-face interactions (7 items; $\alpha = .88$)

Results: Facebook Questionnaire

- EFA suggested a one-factor solution
- CFA showed excellent fit of one-factor solution (CFI = .990, TLI = .970, RMSEA = .098, SRMR = .020)
  - Facebook importance (4 items; $\alpha = .86$)

Results: Zero-Order Correlations

	I-Usage	I-POS	I-AVOID	FB Usage	FB Importance	SA
I-Usage	.76	.35**	.43**	.03	.20**	.22**
I-POS		.81	.70**	.10*	.38**	.47**
I-AVOID			.88	-.02	.19**	.56**
FB Usage				--	.47**	.-.04
FB Importance					.86	.10*
SA						.93

Note. I-Usage = IUQ Usage subscale, I-POS = IUQ internet use as positive substitute for face-to-face interactions subscale, I-AVOID = IUQ internet use as avoidance of face-to-face interactions subscale, FB = Facebook, SA = social anxiety as measured by the S-SIAS, -- = ICC not computed due to this measure being a single item. Due to sporadic missing data, n varies from 592 to 635 across correlations. Values on the diagonal indicate internal consistency coefficients. $**p < 0.01$ level $*p < 0.05$

Results: Multiple Regression

- In multiple regression, internet use as a positive substitute for face-to-face interactions ($r = .096$, $p = .004$) and internet use as avoidance of face-to-face interactions ($r = .333$, $p < .001$) both significantly predicted social anxiety
  - In a follow-up analysis, we compared two correlated correlations (I-POS/S-SIAS and I-AVOID/S-SIAS) using Meng, Rosenthal, & Rubin's recommended analysis
  - It was found that the correlation between I-AVOID and S-SIAS was significantly higher than the correlation between I-POS and S-SIAS ($z = -3.44$, $p < .001$)

Clinical Implications

- Amount of time spent using internet could be considered
- Whether individuals are using internet as avoidance of face-to-face interactions may affect their ability to fully engage in in vivo exposures involving face-to-face interactions
- Individuals who consider Facebook to be particularly important may be at higher risk for using Facebook as a means of avoidance

Discussion

- Individuals higher in social anxiety reported higher internet use, but did not report higher use of Facebook specifically
- Individuals higher in SA reported using the internet as a positive substitute for face-to-face interactions; however, they also reported using the internet to avoid these interactions
  - The relationship between social anxiety and I-AVOID was stronger than that between social anxiety and I-POS
  - Supports Erwin et al.'s (2004) findings
  - However, individuals higher in SA may be using outlets other than Facebook as a substitute for face-to-face interactions
- Future research should examine what factors affect whether individuals higher in SA use the internet for substitution and/or avoidance
  - Why individuals higher in SA spend more time on the internet but not on Facebook
  - How these forms of internet use affect the trajectory of social anxiety (e.g., by serving as maintaining factors) and an individual's interpersonal relationships outside of the internet