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What is This?

Profiling: Predicting Social Anxiety From Facebook Profiles

Katya C. Fernandez[1], Cheri A. Levinson[1], and Thomas L. Rodebaugh[1]

Abstract

Research on Facebook has suggested that individuals' profiles are an accurate portrayal of the self and that it may be possible to identify traits such as narcissism and extraversion by viewing a Facebook profile. It has been suggested, however, that largely internal experiences, such as anxiety, should be less detectable in such contexts. In the current study, the authors tested if objective criteria (e.g., number of interests) on users' profiles ($N = 62$) could discriminate between individuals who were higher and lower in social anxiety. The authors asked six coders to view each participant's Facebook profile and rate the participant's level of social anxiety and then tested whether these ratings correlated with the participant's own self-reported social anxiety level. Our results suggest that social anxiety is recognizable both in objective criteria on the Facebook profile page and from raters' impressions of the Facebook profile. Clinical and research implications are discussed.

Introduction

Facebook is currently the most widely used online social network (OSN; Hitwise, 2011). Facebook has more than 500 million active users worldwide, and the average individual user spends about 55 min per day using Facebook (Facebook, 2011). Furthermore, the large amount (i.e., more than 30 billion pieces) of content sharing (e.g., web links, photo albums, etc.) that takes place each month suggests that Facebook is becoming a prominent form of communication among Internet users (Facebook, 2011), which in turn makes it a prominent form of communication among human beings: It has been estimated that 78% of the population in North America uses the Internet (World Internet Usage Statistics, 2011). The introduction of such a frequently used new medium of communication raises questions about what effects this new medium might have on interpersonal interactions (Gonzales & Hancock, 2011; Kalpidou, Costin, & Morris, 2011), including *what* is communicated and *how* it is communicated.

Research has suggested that the information that individuals post on Facebook profiles is an accurate portrayal of the self (vs. a self-idealized version of the self; Back et al., 2010). Back et al. (2010) found that Facebook profiles were judged as an accurate portrayal of the self by correlating self-report of the profile owner, self-report of four well-acquainted friends, and the average ratings of 10 independent coders of the profile reports of the Big Five personality dimensions. A relevant question then becomes what aspects of the self are communicated to others through profiles. For example, is it the case that most users viewing the profile of an extraverted individual will perceive that individual to be extraverted? Buffardi and Campbell (2008) were able to identify higher levels of narcissism from objective aspects of Facebook profiles, such as number of friends and number of lines in the about me section. Thus, we may be able to detect self-related information from objective criteria on profiles. However, it remains unclear precisely how much information is communicated about the self through Facebook profiles. It is also unclear whether such information is evident via objective criteria, impressionistic observer ratings, or both. We propose that an informative test-case for an individual difference that may or may not be communicated through profiles is social anxiety. On one hand, the social component of social anxiety might suggest that it should be readily communicated through profiles. On the other hand, the fact that social anxiety is largely a subjective experience that is only partially observable by others (e.g., Rapee & Lim, 1992) might suggest that it would be difficult

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to discern through profiles. Indeed, Vazire (2010) largely conceptualized anxiety as a trait that is low in both observability and evaluativeness, and thus should be more difficult to judge. Consistent with her predictions, she found that when compared to strangers and friends, the self was the best judge of anxiety, where judgment of anxiety consisted of a mixture of personality ratings and ratings made after raters viewed a videotaped speech that participants gave. However, research specifically on social anxiety has found that observers are able to accurately distinguish between individuals with a diagnosis of social anxiety disorder and other nonsocial anxiety disorders based on observation of a short social interaction (Baker & Edelmann, 2002).

Social Anxiety and Internet Use

Our review of the literature suggests that people with higher social anxiety may attempt to hide their social anxiety in Internet interactions. Generally speaking, there is evidence to suggest that individuals higher in social anxiety are more comfortable talking with other individuals via socially interactive technologies (e.g., text messaging or OSNs; Pierce, 2009). Individuals higher in social anxiety report behaviors consistent with the social compensation hypothesis, which suggests that they may use the Internet socially to compensate for their social anxiety in other aspects of life (Campbell, Cumming, & Hughes, 2006; Desjarlais, & Willoughby, 2010). For example, adolescents higher in social anxiety reported valuing the controllability of Internet communication more than their nonsocially anxious adolescent peers; similarly, adolescents higher in social anxiety perceived Internet communication to be more reciprocal, broader, and deeper than face-to-face interactions (Peter & Valkenburg, 2006). Campbell et al. (2006) propose that individuals higher in social anxiety may use features such as online chat functions either because they feel more comfortable doing so, or as a means by which to rehearse appropriate face-to-face interaction behaviors.

Caplan (2007) utilizes the self-presentational theory of social anxiety (Schlenker & Leary, 1982) to provide an explanation for the above results that differs somewhat from the social compensation hypothesis: He hypothesizes that individuals higher in social anxiety are motivated to seek social encounters that minimize fear of negative evaluation, which in turn would result in an increase in perceived self-presentational efficacy. Because Internet interactions are commonly assumed to limit the amount of information each participant can incidentally obtain from the other, it might be assumed by individuals with problematic social anxiety that communication over the Internet should limit the chances of negative evaluation. Other theorists offer a similar hypothesis, stating that individuals higher in social anxiety use the Internet to regulate social concerns (Shepherd & Edelmann, 2005). Finally, others have found that individuals higher in social anxiety may be using the Internet to avoid face-to-face interactions, and that such avoidance may in turn exacerbate isolation and interaction anxiety (Erwin, Turk, Heimberg, Fresco, & Hantula, 2004). Though such compensatory Internet use may ultimately maintain anxiety in offline contexts (e.g., face-to-face

interactions), it may reduce the appearance of anxiety in online contexts (e.g., Facebook) because individuals higher in social anxiety could be better able to manage social concerns.

Crucially, all of the evidence reviewed above concerns self-perceptions and opinions of people with higher social anxiety: Although such individuals may believe that they avoid displaying their social anxiety on the Internet, it is not clear that they succeed in doing so. As reviewed above, current evidence is equivocal on this point, because although Facebook profiles may generally be realistic rather than idealized, anxiety in general is thought not to be communicated clearly to others even in real-world interactions. We designed the current study to test the degree to which social anxiety is communicated or hidden in Facebook profiles. If social anxiety is communicated through the Internet it could be helpful to design interventions that educate individuals higher in social anxiety on how others may interpret the information they post on online social networking websites such as Facebook. More specifically, it may also be useful to talk with individuals in therapy about any assumptions they may have about their self-portrayal on these sites (e.g., beliefs that social interactions in person are more threatening than those online because they believe their social anxiety is hidden online). Additionally, it may be that individuals higher in social anxiety are portraying themselves on Facebook in a way that impairs online relationships. Interventions that address this issue may enhance online social interactions, which could in turn enhance face-to-face interactions.

Orr et al. (2009) examined the relationship between shyness and Facebook and found that shyness was correlated with greater Facebook usage. However, Orr et al. (2009) relied solely on self-report measures of Facebook usage and self-reported values of Facebook profiles (i.e., the individual self-reported number of Facebook friends). Additionally, Orr et al. (2009) did not measure social anxiety per se; though shyness can be conceptualized as a sign of elevated levels of social anxiety, shyness and social anxiety are arguably not interchangeable constructs (Chavira, Stein, & Malcarne, 2002). Further, it would be a useful next step to examine portrayals by others (i.e., raters) of the Facebook profile, rather than only self-reports by the Facebook profile user.

The Current Study

Our basic hypothesis was that social anxiety would be discernible in profiles due to less social use of Facebook. For example, we expected that social anxiety would relate to greater Facebook use, but that this greater use would not be attributable to interactions with others. We thus hypothesized that (a) individuals with higher levels of social anxiety would use Facebook more frequently than individuals with lower levels of social anxiety, (b) objective criteria reflecting social versus nonsocial use of Facebook (e.g., number of lines devoted to an individual's description of him or herself) would discriminate between individuals with higher (vs. lower) levels of social anxiety, and (c) outside raters would discriminate between individuals with higher (vs. lower) levels of social anxiety based on information in the individuals' profiles.

Method

Participants

Sixty-two participants were recruited from a private Midwestern university's Psychology undergraduate research pool and compensated with course credit for their participation. Of the 62 participants, more than half were female ($n = 39$; 63%); the mean age was 19.00 years ($SD = 1.05$) and over half were White ($n = 38$; 59%). Other ethnicities reported included Asian or Pacific Islander ($n = 18$; 30%), Black ($n = 4$; 7.8%), and multi-racial ($n = 2$; 3.1%). Participant social anxiety, as measured by the straightforward items of the Social Interaction Anxiety scale ($M = 15.44$, $SD = 10.59$) ranged from very low to very high (range: 1–55). A straightforward score of 28 has been found to correspond to a cutoff for possible social anxiety disorder (Rodebaugh et al., 2011); in our sample, approximately seven participants (11.29%) scored at or above this cutoff, which is comparable to prevalence rates found in national epidemiological studies (Kessler, 2005). Therefore, it is likely that clinically meaningful social anxiety exists in our sample.

Measures

The Social Interaction Anxiety scale (SIAS). SIAS (Mattick & Clarke, 1998) is a 20-item measure employing a 0 (*not at all*) to 4 (*extremely*) Likert-type scale. The items describe anxiety-related reactions to a variety of social interaction situations. Overall, research on the scale suggests good to excellent reliability and good construct and convergent validity (see Heimberg & Turk, 2002, for a review). The reverse-scored items are omitted here because available evidence suggests that these items fail to load on the same factor as the other items, appear less related to social anxiety and more related to extraversion than is desirable, and impair the validity of the scale in a variety of ways (see Rodebaugh et al., 2011, for a review). However, when the reverse scored items were included, the analyses remained unchanged. Internal consistency for the straightforward items was excellent in the current sample ($\alpha = .92$).

The Beck Depression Inventory—II (BDI-II). BDI-II (Beck, Steer, & Brown, 1996) is a standard measure of depressive symptoms with strong psychometric properties (e.g., Beck et al., 1996). The item assessing suicidal thoughts or wishes was not included per Institutional Review Board (IRB) request. Internal consistency for the remaining items was very good in the current sample ($\alpha = .88$; $M = 8.36$; $SD = 6.43$).

The Mini-International Personality Item Pool (Mini-IPIP). Mini-IPIP (Donnellan, Oswald, Baird, & Laird, 2006) is a 20-item short form of the 50-item International Personality Item Pool-Five-Factor Model measure which measures five basic factors of personality: extraversion, neuroticism, agreeableness, conscientiousness, and openness (Goldberg, 1999). The items on the Mini-IPIP employ a 1 (*very inaccurate*) to 5 (*very accurate*) Likert-type scale, and have been found to have acceptable convergent, discriminant, and criterion-related validity (Donnellan et al., 2006). This study utilizes the neuroticism subscale, which showed good internal consistency ($\alpha = .74$; $M = 10.33$, $SD = 3.62$).

Facebook usage. Facebook usage was assessed via a single item (*How often do you use Facebook?*) on a 0 (*never*) to 10 (*hourly, or more often*) Likert-type scale, and represents the only self-report measure of Facebook use in the current study. We used this self-report measure to complement the objective measures of Facebook usage (i.e. number of status updates).

Procedure

Participants in this study completed a questionnaire packet and were then asked to log into their www.Facebook.com account. All procedures were designed to protect confidentiality and approved by the IRB. Participants were asked to display the following pages: Home page (displaying the past 2 months of wall activity), Info page (e.g., the about me section, lists of favorite television shows, etc.), and the Boxes page. Once all pages were saved onto the computer, participants were asked to log-out of their profiles and were debriefed. Following debriefing, all Facebook profiles were deidentified by graduate students (i.e., all identifying information about the participant was removed, including photographs) in preparation for coding by undergraduate raters. Undergraduate raters based their ratings on the deidentified information on the profiles (i.e., they did not see photographs of the participants).

Facebook coding. Coding for the current study was based on the Facebook Profile Coding Scheme (FPCS; Levinson, Fernandez, Rodebaugh, Menatti, & Weeks, 2012). The FPCS was developed with the intention of describing different aspects of the Facebook profile in detail. The FPCS is designed to assess four objective aspects of the Facebook profile (the Home page, the Info page, the Boxes page, and the Photos page), and includes a fifth subjective aspect in which independent raters who have completed objective coding of the profile then rate the profile on a variety of subjective dimensions (*How extraverted do you think the profile user is?*). The following variables represent some of the relevant objective variables coded for in the current study: (a) number of status updates, posts by friends, and posts by self to obtain an objective measure of frequency of Facebook usage, (b) About me (lines devoted to a description of the participant), (c) the number of lines the participant entered under each of the following categories: television (e.g., favorite television shows), music, movies, interests, activities, books, and (d) the number of boxes (number of *boxes*, where boxes represent applications that the participant can subscribe to on their profile, such as games on Facebook or third-party links to other social networking sites). The subjective aspect of the coding scheme consists of a series of adjectives (e.g., conscientious, shy) rated on a 1 to 7 Likert-type scale. Coders are asked to rate the extent to which the profile owner possesses each of the adjectives (i.e., assign each adjective a number from 1 to 7). Coding was conducted by six undergraduate raters who were given definitions of relevant variables (e.g., status post by self vs. someone else), but

Table 1. Zero-Order Correlations: Objective Profile Information

	SIAS	BDI	Neur	# of Friends	TV	Music	Movies	Quotes	Interests	Boxes	About Me	Activities	Books
SIAS	(.92)												
BDI	.36**	(.84)											
Neur	.40**	.33**	(.74)										
# of Friends	−.45**	.05	−.08	(.99)									
TV	.50**	.42**	.12	−.08	(1.0)								
Music	.49**	.60**	.07	−.10	.65**	(1.0)							
Movies	.34**	.48**	.08	.06	.70**	.70**	(1.0)						
Quotes	.36**	.34**	.10	−.06	.29*	.50**	.41**	(.99)					
Interests	.27*	.38**	−.10	.13	.52**	.66**	.51**	.32*	(1.0)				
Boxes	.34**	.18	.10	−.32*	.32*	.24	.16	.34*	.11	(.99)			
About me	.32**	.25	.07	−.04	.27*	.45**	.34**	.82**	.24	.12	(.99)		
Activities	.12	.10	−.04	.09	.18	.13	.32*	.57**	.30*	.40**	.41**	(.99)	
Books	.36**	.45**	.00	−.07	.74**	.77**	.73**	.47**	.65**	.65**	.39**	.25*	(1.0)

Note. SIAS = social interaction anxiety as measured by the Social Interaction Anxiety Scale; BDI = depression as measured by the Beck Depression Inventory-II; Neur = neuroticism as measured by the Mini-International Personality Item Pool; TV, music, movies, quotes, interests, about me, activities, and books are number of lines in each section; Boxes = number of boxes; Cronbach's α or interrater reliability measured by ICC is on the diagonal.
*$p < .05$. **$p < .001$.

otherwise were not trained in any way. Reliabilities for all variables (as measured by the two-way mixed intraclass correlation [ICC] for consistency of the average) ranged from .62 to 1.0 and are reported on the diagonal of Tables 1 and 3. Most objective variables were frequencies.

Results

Frequency of Facebook Usage

Against hypothesis, social interaction anxiety was not significantly correlated ($ps > .17$) with any of the following: self-reported time spent on Facebook, number of status updates, number of posts by friends, and number of posts by self.[1]

Objective Profile Information

As can be seen in Table 1, social interaction anxiety was significantly and negatively correlated with number of Facebook friends, whereas depression and neuroticism were not. Social interaction anxiety was significantly and positively correlated with all profile information sections (i.e., number of lines in about me, number of TV shows, number of music interests) except number of activities. Depression was also significantly correlated with most sections of the profile information except lines in about me, number of boxes, and number of activities. Neuroticism was not significantly correlated with any information on the Info page. To test if social interaction anxiety had a unique relationship with each of these profile information sections over and above depression (i.e., to test that the relationship between social interaction anxiety and profile information is not due to depression) we turned to multiple regression.

We entered social interaction anxiety, depression, and neuroticism as predictors of each of the profile information sections. As can be seen in Table 2, social interaction anxiety uniquely predicted all profile information sections except number of movies and number of activities. Depression was a unique

Table 2. Part Correlations for Social Interaction Anxiety, Depression, and Neuroticism Predicting Profile Information

	SIAS	Depression	Neuroticism
About me	.27*	.17	−.10
TV	.43**	.33*	−.15
Music	.45**	.57**	−.31*
Movies	.24	.43**	−.17
Quotes	.29*	.26*	−.12
Interests	.27*	.37*	−.33*
Activities	.12	.09	−.10
Books	.32*	.41*	−.28*
Boxes	.30*	.07	−.04

Note. SIAS = social interaction anxiety as measured by the Social Interaction Anxiety Scale; Depression = depression as measured by the Beck Depression Inventory-II; Neuroticism = neuroticism as assessed by the Mini-International Personality Item Pool; Boxes = number of boxes; About me, TV, music, movies, quotes, interests, activities, and books are number of lines in each section.
*$p < .05$. **$p < .001$.

predictor of all profile information sections except number of lines in about me, number of boxes, and number of activities.

Observers Ratings of Profile Information

As can be seen in Table 3, social interaction anxiety was significantly positively correlated with raters' impressions of social anxiety, loneliness, and anxiety. Self-reported depression was only correlated with raters' impressions of loneliness. Self-reported social interaction anxiety was significantly *positively* correlated with subjective ratings of likeability ($r = .30$ $p = .019$) and willingness to be the profile user's friend ($r = .30, p = .020$).

Simultaneous Multiple Regression Analyses

We tested if raters' impressions from viewing a profile were able to predict self-reported social interaction anxiety over and

Table 3. Zero-Order Correlations: Observer's Ratings of Profile Information

	SIAS	BDI	Social Anxiety	Lonely	Anxious	Extra	Neur	Depression	Afraid of Criticism
SIAS	(.92)								
BDI	.36**	(.84)							
Social Anxiety	.27*	.03	(.91)						
Lonely	.29*	.30*	.75**	(.77)					
Anxious	.31*	.18	.65**	.63**	(.69)				
Extra	−.13	.01	−.52**	−.41**	−.12	(.92)			
Neur	.12	.19	.24	.41**	.53**	.23	(.79)		
Depression	.17	.01	.65**	.70**	.63**	−.12	.47**	(.62)	
Afraid of Criticism	.04	.11	.64**	.53**	.70**	−.09	.55**	.50**	(.87)

Note. SIAS = social interaction anxiety as measured by the Social Interaction Anxiety Scale; BDI = depression as measured by the Beck Depression Inventory-II; The remaining variables are coders' ratings of profile information; Cronbach's α or interrater reliability measured by ICC is on the diagonal.
*p < .05. **p < .001.

above common predictors of social anxiety. We entered raters' impression of social anxiety, neuroticism, and depression into a simultaneous multiple regression to obtain partial correlations predicting self-reported social interaction anxiety. Raters' impressions of social anxiety was a significant predictor (part $r = .31, p = .026$) over and above self-reported depression (part $r = .30, p = .030$) and neuroticism (part $r = .39, p = .004$).

Discussion

Against hypothesis, we found that individuals higher in social anxiety did not report or display higher usage of Facebook. This result held for objective criteria rated by coders (i.e., individuals higher in social anxiety did not post status updates more frequently, nor did their friends post more or less frequently on their wall). It is especially noteworthy that both self-report and objective criteria suggest individuals higher in social anxiety are not using Facebook more frequently than individuals with lower levels of social anxiety. This result is consistent with research that has found that individuals higher in social anxiety were not necessarily more likely to form relationships on Facebook (Sheldon, 2008). However, future research should utilize several methods of assessing Facebook usage frequency (e.g., asking participants how many minutes per day are spent on Facebook).

However, we did find that it was possible to distinguish individuals' level of social anxiety from their Facebook profile. This finding was supported by both objective criteria and in raters' impressions of the Facebook profile (which did not contain photographs of the profile owner). Individuals with higher levels of social anxiety posted a greater amount of information about themselves in every section of their profile home page except for number of activities. This pattern was consistent across all types of information, including lines in the about me section, and number of interests, quotes, books, music, and movies. Additionally, this result was not accounted for by self-reported depression or neuroticism, although depression also predicted many of these outcomes.

We suggest two possible explanations for these findings. First, it seems plausible that individuals higher in social anxiety may try to compensate for their discomfort and negative evaluation fears by placing many things they are interested in on their profile page. It may be that individuals with higher levels of social anxiety believe that if they list a large amount of their interests, an outsider viewing their profile will find *something* on the list that they identify with and will in turn end up liking (or at least not negatively evaluating) the individual. This explanation is also consistent with the social compensation hypothesis; that is, if individuals higher in social anxiety feel uncomfortable discussing their preferences in face-to-face interactions, they may turn to display their preferences using an online medium. The use of an online medium would still convey the individual's preferences with minimal social interaction anxiety. Alternatively, it may be that individuals higher in social anxiety have more salient nonsocial interests, music they listen to, and movies they like. Individuals with higher levels of social anxiety are likely to avoid social interactions and friendships, and therefore, they may turn to other forms of entertainment, such as music, movies, and books to fill their time. In other words, the increased frequency of profile information may be a reflection of a true increase in time spent in nonsocial activities. Future research should test if this assertion is true.

Indeed, we found that individuals higher in social anxiety had fewer Facebook friends. However, individuals' level of depression and neuroticism was not related to number of Facebook friends, suggesting that having fewer friends on Facebook is specific to social anxiety. This finding is consistent with research that has found that impairment in friendships is specific to social anxiety disorder (e.g., Rodebaugh, 2009). Additionally, we found that after viewing Facebook profiles, raters were able to distinguish from unidentified Facebook profiles the users' level of social anxiety. The profile users' self-reported of social anxiety was significantly correlated with the raters' impressions of social anxiety, anxiety, neuroticism, and fear of criticism. We also found that raters' impressions of social anxiety from viewing Facebook profiles were able to predict self-reported social anxiety over and above self-reported depression and neuroticism. This result suggests that

it *is* possible to detect subjective experiences such as social anxiety that have been proposed to be only partially observable by others. Social anxiety is at least partially a social phenomenon, which may explain why it was easier to detect than was neuroticism. Future research should test if other largely internal experiences (such as negative affect) are discernable via Facebook profiles. We also find it plausible that social anxiety was more detectable because it was more specific and also germane to the context assessed here (e.g., a social network). That is, we expect that social anxiety would not be as detectable in the context of more private activities (e.g., music listened to on a daily basis; Rentfrow & Gosling, 2003), whereas other characteristics might be (e.g., openness to experience).

The current study carries certain limitations. For example, our sample size was relatively modest, and part of our data was based on responses to questionnaires made by primarily Caucasian, female undergraduate students, which limits the generalizability of our findings. Our coders received no special training in detecting participant characteristics via Facebook profiles, but they were research assistants in a laboratory that focuses on anxiety. It is thus plausible that they were especially attuned to signs of social anxiety, and may have even been more inclined to like people with higher social anxiety. However, given that we were not able to accurately predict all of the features that should be expected of a Facebook profile given a certain level of social anxiety, we do not find it plausible that our coders represent experts with special knowledge. Similarly, it is possible that our coders were able to detect social anxiety on the Facebook profiles because they were asked to scan the profile in a detailed way, and that if they were simply asked to look through the profile without coding objective variables, they may not have been as likely to detect social anxiety. Another limitation is that we did not measure length of time that a participant was a member of Facebook, which could potentially account for some of the results obtained. However, given the nature of our sample (undergraduate students within a narrow age range), we do not believe that length of time that a participant was a member of Facebook would change the results in any significant way. Finally, in the current study Facebook usage was measured via a single item; future research assessing Facebook usage would benefit from including more items.

Keeping these limitations in mind, our findings suggest avenues for much future research. Future studies could utilize more comprehensive assessments of social anxiety and related constructs, and use innovative experimental paradigms to study the relationship between Facebook profiles and social anxiety. For example, manipulating different aspects of Facebook profiles and assessing whether raters' impressions of social anxiety also change. Similarly, future research could focus on the relationship between raters' self-reported social anxiety and their impressions of Facebook profiles, as it is possible that certain traits or characteristics of raters affect their interpretations of various elements of Facebook profiles. Future studies could also assess the validity and reliability of our coding system, and determine whether certain variables are more suitable for certain indices (e.g., frequency of Facebook use) than others. It might also be interesting to code Facebook profiles for the content included in certain sections, such as the about me section. Finally, our study does not explain how an individual's use of Facebook forms and evolves over time. It is possible that individuals higher in social anxiety change the way they use Facebook depending on any number of factors (e.g., feedback from friends); similarly, it is possible that their experience with Facebook either exacerbates or dampens their fear of negative evaluation over time. Further research would shed more light on these possible longitudinal processes.

If future research shows that manipulating variables (such as number of movie interests listed) on a Facebook page produces decreases in the amount of social anxiety that viewers perceive, it may be worthwhile to include such discussions in psychotherapy. In our personal experience, we have found that online social media platforms such as Facebook are becoming more common as a topic of conversation in psychotherapy. It may be possible that individuals with higher levels of social anxiety could benefit from instruction in what might amount to online social media skills training. We offer this suggestion tentatively, as the concept of social skills training in regard to social anxiety has not been without controversy. However, we would like to note that in reference to online social media, social skills would be more clearly observable, thus possibly simplifying the process of training. That is, whereas an adequate use of eye contact may be difficult to operationalize, an adequate amount of personal information on a profile page may be simpler to describe. Our hope would be that such training could be provided efficiently, yet lead to improved social support and increased satisfaction in interpersonal relationships.

Our findings suggest that, in addition to external traits such as narcissism (Buffardi & Campbell, 2008), humans are able to convey internal experiences such as social anxiety via technology such as Facebook and that *it is possible* to recognize social anxiety from a Facebook profile. However, future research is needed to test if encouraging individuals to change their Facebook profiles can improve problematic social anxiety and its related interpersonal impairment. As online social media becomes more salient in many individuals' lives, it is increasingly important to examine the impact of such services, as well as their potential to alleviate suffering.

Authors' Note

Katya C. Fernandez and Cheri A. Levinson contributed equally to this manuscript.

Declaration of Conflicting Interests

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Note

1. In addition to our measure of social interaction anxiety, we tested all analyses using a measure of fear of negative evaluation and observed similar relationships.

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