

Antecedents of positive self-disclosure online: an empirical study of US college students' Facebook usage

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Abstract: This study investigates the factors predicting positive self-disclosure on social networking sites (SNSs). There is a formidable body of empirical research relating to online self-disclosure, but very few studies have assessed the antecedents of positive self-disclosure. To address this literature gap, the current study tests the effects of self-esteem, life satisfaction, social anxiety, privacy concerns, public self-consciousness (SC), and perceived collectivism on positive self-disclosure on SNSs. Data were collected online via Qualtrics in April 2013. Respondents were undergraduate students from the University of Connecticut. Using ordinary least squares regression, the current study found that self-esteem and perceived collectivism increased positive self-disclosure, life satisfaction, and privacy concerns decreased positive self-disclosure, and the effects of social anxiety and public SC were not significant.

Keywords: positive self-disclosure, self-esteem, life satisfaction, social anxiety, privacy concerns, public self-consciousness, perceived collectivism

Introduction

The emergence of social networking sites (SNSs) has transformed the means of interpersonal communication dramatically. Computer-mediated communication (CMC) eliminates people's social presence cues that decrease apprehension about communication.¹ On SNSs, people can manage their self-presentations in a favorable way.²⁻⁵ SNS users selectively disclose thoughts, opinions, and feelings online.^{6,7} The features of SNSs, such as their settings of online or offline, the types of relationship, and the visibility of personal pages allow users to block unwanted viewers.^{7,8}

Facebook is recognized as the most visited SNS. By the end of the second quarter of 2016, the number of active Facebook users was 1.7 billion.⁹ College students are the most active Facebook users. Previous studies found that college students spend 28 minutes per day on checking Facebook updates, which has become part of their daily routine.¹⁰ The benefits of Facebook include increased social capital, social well-being, and life satisfaction.^{3,4,10,11} Facebook users are concerned about impression management and tend to reveal positive aspects of their life.¹² In previous SNS studies, the antecedents of positive self-disclosure online have not been examined systematically. To address this literature gap, the current study investigates the factors that may predict positive self-disclosure on SNSs, using data collected from the US Facebook users.

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Literature review

Self-esteem

Self-esteem is a term used in psychology that refers to a person's emotional evaluation of his or her own worth.¹³ People's self-evaluation is based upon social norms and personal experiences. Self-esteem influences individual strategies in dealing with challenging situations and affects the way people communicate with others.¹⁴

Self-esteem is an influential predictor of self-disclosure by SNS users. Previous studies found that users with high self-esteem tend to be satisfied with life and post more photos and words about their daily life.¹⁵ On SNSs, people with high self-esteem who aspire to maintain a positive self-image are concerned about negative comments from online contacts.¹⁶ In contrast, those with low self-esteem tend to be socially anxious, shy, and introverted.¹⁷ Such individuals with low self-esteem are likely to perceive greater loneliness and lesser satisfaction in their relationship with others.^{18,19} The current study hypothesizes that high self-esteem leads to increased positive self-disclosure online.

H1: Self-esteem positively predicts positive self-disclosure on SNSs.

Life satisfaction

Life satisfaction refers to people's general perceptions of their life quality.²⁰ Researchers defined life satisfaction as people's positive feelings about their life according to their life expectation.²¹ In communication studies, life satisfaction is framed as subjective well-being or subjective personal statement.²² Life satisfaction is partly determined by standards of living. Income level, education, and social status can influence an individual's life satisfaction,²³⁻²⁵ as do existing social ties.²⁶ Acceptance by friends, frequent interpersonal interactions, and active participation in social activities lead to happy feelings. People with high life satisfaction tend to receive greater social support than those with low self-satisfaction.²²

Previous studies found that people who actively use Facebook feel happier and greater connectedness.¹⁰ In a personal crisis, an active Facebook user receives greater social support from families and friends. College students consider Facebook a major source of social interactions. Compared with the average population, college students spend more time on social activities, and friendships built in college last longer.²⁷ College users who have more friends tend to be satisfied with life.¹⁰ Positive postings on Facebook can gain the attention of online contacts, which, in turn, strengthens social ties. In the current study, life satisfaction is expected to predict positive self-disclosure.

H2: Life satisfaction positively predicts positive self-disclosure on SNSs.

Social anxiety

Social anxiety refers to an individual's worries about how one appears to others. People with high social anxiety are afraid of face-to-face social interactions.²⁸ They spend less time with friends and are less likely to establish new relationships.²⁹

Two hypotheses address the effect of social anxiety on self-disclosure on an SNS. The first hypothesis – social compensation theory – proposes that CMC is a powerful social interaction tool for people with deficient communication skills in face-to-face interactions.^{30,31} In CMC, people have more time to manage their self-presentation. Because of the lack of presence cues, CMC allows users to engage in communication with lesser stress. The controllability of CMC helps people to lower their apprehension with regard to communication. People with high social anxiety were found to be more comfortable and confident in CMC.^{32,33} However, this hypothesis has been challenged recently. Researchers found that although people with high social anxiety perceived Facebook as an appealing avenue for social interactions, their negative postings elicited undesirable comments from others.³⁴ Negative responses from others were found to intensify apprehension about communication. The second hypothesis proposes that people with low social anxiety tend to be extroverts online and benefit more through online interactions. People with low social anxiety often perform better on expanding social networks through the Internet.³⁵ In contrast, previous studies found that individuals with a higher level of social anxiety tended to self-disclose less during conversations as compared with non-anxious individuals.³⁶ Extending this rationale into the context of Facebook, social anxiety may influence the valence of self-disclosure. Based on the so-called "rich get richer" assumption, the current study expects that low social anxiety would lead to more positive self-disclosure on Facebook.

H3: Social anxiety negatively predicts positive self-disclosure on SNSs.

Public self-consciousness

Public self-consciousness (SC) is defined as "the attention to the self as a social object".³⁷ Public SC affects the styles of interpersonal interaction.^{38,39} Individuals with high public SC are concerned about others' impressions about themselves, and this results in increased social anxiety and self-monitoring. Public SC was found to be associated with make-up choice, fashion opinion, and interest in clothing.⁴⁰

Discrepancy between self-image and ideally defined image leads to increased social anxiety.⁴⁰ People with high public SC tend to manage their self-presentation carefully and present positive aspects of their life to the public.⁴¹ Previous research found that individuals with high public SC post more photos and comments on SNSs.⁵ The current study expects that public SC positively predicts positive self-disclosure.

H4: Public SC positively predicts positive self-disclosure on SNSs.

Privacy concerns

The Internet not only provides convenience for people but also provides opportunities for criminals. Within a few seconds, malicious agencies can collect a huge amount of private information from Internet users.^{42,43} Marketers can design soliciting information according to online postings of Internet users. The privacy invasion online can result in financial loss and relational conflicts with online contacts.⁴⁴⁻⁴⁶ Nowadays, Internet users have become increasingly concerned about the security of personal data online.⁴⁷ Consistent with prior studies, the current study operationally defines privacy concerns as people's worries about potential privacy invasions online.^{48,49} For Facebook users, frequent postings of luxury purchases and travels may draw the attention of criminals and may aid criminals to design scam information accordingly. People with high privacy concerns are likely to be aware of the risks of show-off posts on SNSs. The current study expects that Facebook users with high privacy concerns tend to be cautious in risky positive self-disclosure.

H5: Privacy concerns negatively predict positive self-disclosure on SNSs.

Perceived collectivism

People with different cultural backgrounds and life experiences tend to possess different perceptions of self, others, and the relationship between self and others. Differences in such perceptions influence people's social behaviors.⁵⁰ In an individualist culture, people are autonomous and independent from other in-group members. Their behaviors are based on individual values rather than group norms.⁵¹ In a collectivist culture, people tend to rely on one another, give priority to collective norms, and behave unanimously.⁵² Previous research found that Internet users in individualist cultures tend to engage more in intentional self-disclosure online because they are less concerned about others' comments.⁵³⁻⁵⁵ In contrast, people with higher perceived collectivism tend to consider the feelings of other Facebook contacts and manage their self-presentations carefully. The current study expects

that people with higher perceived collectivism are more likely to disclose positive aspects of their life.

H6: Perceived collectivism positively predicts positive self-disclosure on SNSs.

Methods

Sample sources

This survey study was approved by the Institutional Review Board of the University of Connecticut in March 2013. The survey was conducted on Qualtrics, which is an online survey platform, in April 2013. Participants were undergraduates from the University of Connecticut (N=368). Subjects read the informed consent first and then decided whether to continue the survey or not. All participants signed the informed consent. Because the focus of the current study is Facebook usage, subjects who were not Facebook users were excluded, resulting in a final sample size of 292. Consistent with prior studies, the missing values of continuous variables were replaced with a grand mean.⁵⁶

Measures

The current study treated gender, race, and Internet efficacy as control variables. Most respondents identified themselves as White (77.74%), followed by Asian (9.93%), Arabic (7.19%), African American (4.45%), and Native American (0.68%). In terms of gender, 38.14% of respondents were male. The current study used a 7-point scale to measure Internet efficacy. The result indicated that the majority of respondents perceived themselves to be proficient Internet users. Cronbach's α was used to assess the reliability of scale measurements. A previous study suggested that values greater than 0.70 are acceptable.⁵⁷ Descriptive statistics are presented further (Table 1).

Self-esteem

Adapted from a prior study,¹³ self-esteem was measured by asking respondents how they perceived themselves. Participants rated questions on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree). The measurement was reliable (Cronbach's $\alpha=0.85$). Respondents of the current study reported high self-esteem ($M=5.20$, $SD=0.99$).

Life satisfaction

Consistent with a prior study, life satisfaction was measured by five items to assess respondents' perceptions about their life.¹⁰ Responses ranged from 1 (strongly disagree) to 7 (strongly agree) ($M=4.79$, $SD=1.13$). The scaled measurement was reliable (Cronbach's $\alpha=0.85$).

Table 1 Descriptive statistics of variables

Variable	Mean	SD	Minimum	Maximum	Reliability (α)
Exogenous variables					
Male ^a	38.14%				
White ^a	77.74%				
African American ^a	4.45%				
Asian ^a	9.93%				
Native American ^a	0.68%				
Arabic ^a	7.19%				
Internet efficacy	5.18	1.02	1.57	7	0.84
Endogenous variables					
Self-esteem	5.20	0.99	2.29	7	0.85
Life satisfaction	4.79	1.13	1.4	7	0.85
Social anxiety	4.32	1.03	1	6.83	0.72
Public self-consciousness	5.07	0.92	1.71	7	0.80
Privacy concerns	4.04	1.18	1	6.9	0.90
Perceived collectivism	5.09	0.89	2.33	7	0.75
Positive self-disclosure	5.55	1.29	1	7	0.85

Note: ^aPercentage of dichotomous variables.

Social anxiety

Social anxiety was measured by a scale with six items to assess people's anxiety about life, which is consistent with prior research.²⁸ Responses ranged from 1 (strongly disagree) to 7 (strongly agree). The measurement was reliable (Cronbach's $\alpha=0.72$). Respondents reported moderate levels of social anxiety ($M=4.32$, $SD=1.03$).

Public SC

Public SC was measured by a seven-item scale developed by a previous study.³⁸ Responses ranged from 1 (strongly disagree) to 7 (strongly agree) on people's concerns about others' impression about them. The measurement was reliable (Cronbach's $\alpha=0.80$). The result indicated that respondents were concerned about how they are viewed by others ($M=5.07$, $SD=0.92$).

Privacy concerns

Privacy concerns were measured using a 10-item scale, which is consistent with that reported in a previous study.⁵⁸ Responses ranged from 1 (strongly disagree) to 7 (strongly agree). The scale measurement was reliable (Cronbach's $\alpha=0.90$). Respondents reported moderate levels of privacy concerns ($M=4.04$, $SD=1.18$).

Perceived collectivism

Perceived collectivism was measured by a six-item scale developed in previous research.²⁷ Responses ranged from 1 (strongly disagree) to 7 (strongly agree) ($M=5.09$, $SD=0.89$). The measurement was reliable (Cronbach's $\alpha=0.75$).

Positive self-disclosure

Positive self-disclosure was measured with three items, which were adapted with a prior study.⁵⁹ Responses ranged from 1 (strongly disagree) to 7 (strongly agree). In the current study, the scale measurement was reliable (Cronbach's $\alpha=0.85$). Most respondents identified their self-disclosure on Facebook as positive ($M=5.55$, $SD=1.29$).

Results

Using STATA 13.0, the current study used ordinary least squares regression to test the hypothetical model, which is a method widely used to estimate the linear relationship between variables.⁶⁰ The current study first tested the effects of control variables on the dependent variable (Model 1 in Table 2). Then, holding constants for control variables, the effects of the six antecedents on positive self-disclosure were examined (Model 2 in Table 2). The overall model fit was satisfactory ($R^2=0.32$, $p<0.001$).

H1 posits that self-esteem positively predicts positive self-disclosure online. The effect was found to be positive and significant ($\beta=0.36$, $p<0.001$). Thus, H1 was supported. H2 holds that individuals who are satisfied with their life are more likely to engage in positive self-disclosure online. Contrary to H2, the effect of life satisfaction was found to be negative ($\beta=-0.14$, $p<0.05$). Thus, H2 was rejected. H3 proposes that social anxiety negatively predicts positive self-disclosure. Such an effect was found to be insignificant. Therefore, H3 was rejected. H4 holds that privacy concern is negatively associated with positive self-disclosure and was supported in the current study ($\beta=-0.10$, $p<0.05$). H5 posits

Table 2 Standardized ordinary least squares regression predicting positive self-disclosure (N=292)

Variable	Model 1	Model 2
Exogenous control variables		
Gender	0.17**	0.14**
Black	0.03	0.03
Asian	-0.20***	-0.17**
Latino	-0.08	-0.04
Native	-0.01	-0.04
Arabic	0.02	0.01
Internet efficacy	0.28***	0.03
Endogenous independent variables		
Self-esteem		0.36***
Life satisfaction		-0.14*
Social anxiety		-0.08
Privacy concerns		-0.10*
Public self-consciousness		0.05
Perceived collectivism		0.19**
R ²	0.19***	0.32***

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

that public SC positively predicts positive self-disclosure online. Such an effect was found to be insignificant. Thus, H5 was rejected. H6 assumes that perceived collectivism leads to increased positive self-disclosure, and was supported in this study ($\beta = 0.19$, $p < 0.01$).

Discussion

The current study provides a preliminary test of the factors predicting positive self-disclosure on SNSs. A positive effect of self-esteem on positive self-disclosure was documented. This finding suggested that individuals with high self-esteem tend to be concerned about others' impressions about them. To enhance their positive self-image, they are likely to disclose positive aspects of their life on SNSs. Facebook users can edit their postings strategically to draw the attention of contacts and receive more positive feedback. Prior studies found that, in face-to-face interactions, individuals use feedback from others to evaluate their self-presentation.^{61,62} Extending this rationale to SNSs, users use positive feedback from others to maintain their self-esteem.

Consistent with prior studies,^{48,63,64} college-going respondents of the current study reported high privacy concerns. College students actively use the Internet for information search, school assignments, and entertainment. SNSs satisfy the needs of college students to establish new contacts and maintain existing relationships.¹⁰ Their frequent use of the Internet increases their chances of being victims of privacy invasion, which, in turn, increase privacy concerns. Additionally, cyber security education on campus and high Internet

efficacy help college students to develop better understanding of privacy risks online. College students are likely to monitor unauthorized access into personal SNS accounts and install antivirus software to protect their data online.

Another finding of this study is that people's privacy concerns negatively predict positive self-disclosure on SNSs. Prior research found that hackers and solicitors become increasingly reliant on SNSs to contact target victims.⁶⁵ They distribute malware through SNSs and design phishing postings to seduce SNS users.⁶⁶ For instance, if she or he posts a photo of a newly purchased auto vehicle, hackers are likely to design phishing information pertaining to auto insurance. Show-off posts on SNSs increase the risk of privacy invasion. The finding of the current study suggested that people with high privacy concerns tend to understand the mechanism of cyber-attacks. To reduce privacy risks, they tend to use neutral words in their postings to avoid the attention of cyber criminals.

Another interesting finding is that perceived collectivism positively predicts positive self-disclosure. This finding suggests that Facebook users who tend to give a group priority over individual needs tend to reveal the positive side of their life. Such positive self-disclosure can bring enhanced happiness to other group members and strengthen existing social ties.³ In a public space like Facebook, collectivists are likely to please others. In a personal crisis, people with higher perceived collectivism tend to exchange ideas with friends using private communication channels, such as telephone and instant messaging, but not SNSs.

Contrary to existing research,^{3,10} the current study found that life satisfaction is negatively associated with positive self-disclosure online. People with high life satisfaction tend to perceive that their current living standards have met their life expectation.⁶⁷ Prior studies found that people with high life satisfaction tend to be rich, healthy, and well-educated.²³ The finding of the current study suggested that people with high life satisfaction tend to pay less attention to others' negative comments online. On SNSs, they are willing to disclose negative aspects of their life honestly.

In the current study, the effects of social anxiety and public SC were found to be insignificant. This finding provides support for the coexistence of the two hypotheses of social anxiety. For some people with high social anxiety, they can build enhanced self-image on Facebook. The anonymity feature of SNSs makes such individuals confident in self-presentation online. For other people with high social anxiety, the assumption of "the rich get richer" persists. They post more negative words online.

The effect of public SC on positive self-disclosure can be more complicated. People with higher perceived public SC may simply avoid online interactions if they are concerned about others' critiques. For people who rarely engage in online interactions, it is difficult to judge the valence of self-disclosure on SNSs.

Limitations and implications for future research

Three major limitations should be noted. First, the use of cross-sectional data cannot test causal relationships. Future studies with panel data can provide a more rigorous test on the antecedents of positive self-disclosure. Second, self-report measures can be biased in measuring self-esteem, life satisfaction, social anxiety, and positive self-disclosure. Respondents may overestimate self-esteem, life satisfaction, and the valence of self-disclosure, but may underestimate social anxiety. Future research should use other research methods to quantify these concepts. For instance, to assess the valence of self-disclosure, content analysis of one's Facebook account can be more accurate than a self-reported survey. Third, the backgrounds of online contacts may impact SNS users' patterns of self-disclosure. For instance, child users behave differently when their SNS accounts are connected to that of their parents.⁶⁸ Future research should study individual strategies of self-disclosure in different online contexts.

Disclosure

The author reports no conflicts of interest in this work.

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