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Enacted Social Support on Social Media and Subjective Well-Being

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This study examines supportive interactions on Facebook to understand the role of social media use in obtaining social support and promoting psychological well-being. By assessing the amount of social support received through Facebook and by other means, this study ascertains a direct relationship between Facebook use and social support reception. Facebook use was the strongest predictor of social support reception, even stronger than the number of strong ties, although its link to life satisfaction was not significant. Findings also demonstrated that gender difference in social support reception was not found in the context of social media and that fixed Internet use had a negative association with life satisfaction, whereas mobile Internet use had no such relationship.

Keywords: social media, social support, strong tie, life satisfaction, Facebook

Communication scholars have long been interested in whether and how the use of new media affects our social lives. Reflecting widespread social concern for the effects of new technology, early studies argued that Internet use might be detrimental to interpersonal relationships and psychological well-being (for a review, see Baym, 2010). Kraut et al. (1998) reported that heavy Internet use was associated with lower levels of face-to-face communication with family and friends and higher levels of depression, stress, and loneliness. Similarly, Nie, Hillygus, and Erbring (2002) and Robinson, Kestnbaum, Newstadtl, and Alvarez (2002) claimed that Internet use replaced the time formerly devoted to social interactions or the use of other media.

The displacement hypothesis, which posits that new media use displaces time spent on other activities, was influential in the early Internet period but has been criticized since then due to a lack of empirical support. A follow-up study by Kraut et al. (2002) contrasted with the previous research, reporting generally positive effects of Internet use on social life and psychological well-being. Hampton and Wellman (2003) demonstrated that Internet users were more likely to communicate with other people or to meet others in person than non-users. Active Internet users were also more likely to use other communication tools, to have frequent face-to-face conversations (Baym, Zhang, & Lin, 2004), and to have contact with a greater number of people (Wang & Wellman, 2010). Furthermore, when people

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become geographically dispersed, the Internet served as a useful way to maintain relationships (Quan-Haase, Wellman, Witte, & Hampton, 2002). These studies concluded that Internet use supplements or reinforces face-to-face communication rather than replaces it.

More recently, as a variety of information and communication technologies (ICTs), such as social media and mobile phones, are incorporated into people's daily routines, scholars have found that ICT use provides new affordances for relational maintenance. Chen (2013) showed that online communication is positively associated with the number and proportion of strong ties in individuals' core networks. Mobile Internet use, which enables individuals to stay connected on the move, has been found to be a time-enhancing activity rather than a time-displacing activity, which indicates a positive effect of mobile Internet on sociability (Ishii, 2004). Social media have become a significant means of daily conversations (boyd & Ellison, 2007); also, social media use can reinforce existing social relations by keeping individuals informed of others' activities (Hargittai, 2007). Pursuing these scholarly concerns further, researchers have shown that social media use can play a positive role in enhancing interpersonal relationships and mental health. Facebook use significantly promotes social capital and subjective mental well-being, generating greater benefits for people suffering from low levels of self-esteem and life satisfaction (Ellison, Steinfield, & Lampe, 2007, 2011; Valenzuela, Park, & Kee, 2009). Similarly, the number of Facebook friends is positively associated with perceived social support, which in turn leads to reduced stress and increased life satisfaction, particularly in high-stressed groups (Nabi, Prestin, & So, 2013). Hampton, Sessions Goulet, Rainie, and Purcell (2011) revealed that Facebook users have closer, more trustworthy, and supportive relationships than the average American, which implies profound impacts of social media use on interpersonal relationships.

The current study also examines the associations among social media use, interpersonal relationships, and subjective well-being, particularly focusing on social support exchange. Social support, one of the most significant benefits from social relationships, is a barometer of one's relationship quality and psychological well-being (Cohen, Gottlieb, & Underwood, 2000). As such, it is crucial to better investigate whether the use of social media contributes to the transaction of social support, particularly given that younger generations use social media on a daily basis. Specifically, this study expands social support scholarship in two ways. First, this research looks into social support exchange both in and out of Facebook to better understand the effects of Facebook use. In doing so, the study captures to what extent social media use facilitates exchanging social support. Although prior research displayed positive relationships between social media use and social capital or perception of social support, whether the use of social media directly affects supportive interactions has not been thoroughly examined. (A notable exception is Stefanone, Kwon, & Lackaff, 2012.) Second, social support research generally deals with specific populations, such as people with terminal illness (e.g., cancer), older adults, and online support group members who are in urgent need of specialized social support. Although extant research on support groups offered insights into the impact of online social support on health outcomes, other contexts should be investigated, given that individuals also increasingly turn to online social support owing to the prevalent use of ICTs.

In aggregate, this study investigates the types of social support that individuals acquire through social media and by other means (e.g., face-to-face communication) to understand the extent to which individuals gather social support through social media use. The associations among the amount of

received social support, the size of one's social network, and the use of social media have been considered to determine whether social media can be a significant means of social support exchange. Perceived life satisfaction is included to assess the impact of mediated social support on individuals' subjective well-being. The results demonstrate that social media use has a greater impact on social support reception than the number of strong ties, indicating a positive role of social media in cementing relationships. The effects of gender, age, and Internet use are discussed in light of the findings.

Social Support via Social Media and Subjective Well-Being

Conceptualization of Social Support

Many scholars have sought to refine and develop concepts of social support, resulting in numerous definitions and measures (Barrera, 1986). These definitions can be classified into three broad categories that reflect specific dimensions of social support: social embeddedness, perceived social support, and enacted social support (Barrera, 1986; Vangelisti, 2009). First, the *social embeddedness perspective* focuses on individuals' connections to others or available social ties in their social environments (Stokes, 1983), as social networks are regarded as the "infrastructure of social support" (Albrecht & Adelman, 1987). Second, *perceived social support* is germane to psychological or cognitive appraisals of supportive relationships, and is defined as the social support that people believe is available to them (Procidano & Heller, 1983). Third, *enacted social support* is conceptualized as "actions" that people perform when they render assistance (Barrera, 1986, p. 417). As Vangelisti (2009) points out, a communication perspective focuses on the "interactions" (p. 40) that occur between the providers and recipients of social support. Unlike available or perceived social support, the concept of enacted social support deals with what individuals actually do when they desire to provide social support; namely, researchers ask about the types of supportive behaviors that people experience.

To capture individuals' experiences of social support, this study employs the enacted support perspective through an examination of the occurrence of supportive behaviors on social media. First, by conceptualizing social support as "interpersonal transactions" (House, 1981, p. 39), this perspective places an emphasis on investigating everyday practices that constitute social support. As Thoits (2011) proposed, attentive investigations of ordinary days can reveal individuals' routine interactions that convey social support. Instead of dealing with proxies (e.g., perceived number of supportive ties) or measuring support exchange in experimental settings, the enacted social support perspective allowed researchers to look into daily behaviors that people use to provide support. Second, in contrast to social embeddedness or perceived support perspectives, the enacted support approach differentiated particular dimensions of supportive interactions that may have varied interpersonal or health implications (e.g., a case in which a person receives frequent informational support but suffers from a lack of emotional support). Third, scholars have pointed out that perceived social support scales overlap with measures of perceived stress or other self-reported psychological distress (Barrera, 1986; Gore, 1981; Henderson et al., 1978). Thus, when examining the associations between social support and subjective well-being, enacted or received social support, which measures frequency of behaviors, offers enhanced utility and validity. Keeping this discussion in mind, this study employs the framework of enacted social support to better ascertain the relationships among individuals' experiences of exchanging social support and psychological well-being. In

the next section, existing literature on social support in mediated environments, the role of strong ties in supportive communication, and the impact of social support on subjective well-being are reviewed.

Social Support in Mediated Environments

Early studies of online social support investigated the ways in which supportive communication patterns emerged and evolved in online environments, particularly in comparison with face-to-face contexts (Baym, 1998). For instance, Braithwaite, Waldron, and Finn (1999) found that people developed unique features of mediated social support (e.g., employing emoticons and signatures) to deliver nonverbal cues and facilitate forging relationships. More recent studies of online support groups have investigated further associations among mediated social support and online participation, online social networks, and health outcomes (for a review, see Rains & Young, 2009; Wright & Bell, 2003). Individuals who spend more time communicating with online support group members are more likely to have a larger online support network and a higher level of support network satisfaction (Wright, 2000a, 2000b). Also, Bambina (2007) revealed that core members, who most actively engaged in the online group communication, provided and received more emotional social support than peripheral members. These studies confirmed that participation in online support groups was positively associated with increased social support reception and satisfaction.

Extending these findings, scholars have examined the use of social media to ascertain its effect on social support exchange. As DeAndrea, Ellison, LaRose, and Steinfield (2012) suggested, social media can be designed and used to enhance individuals' perception of available social support and support networks. Ellison et al. (2011) argued that Facebook use may offer more opportunities to give and receive emotional social support through Facebook friend networks. Indeed, scholars have shown that Facebook has been used as a meaningful venue for soliciting and receiving social support. Facebook use was positively associated with nonmaterial forms of support such as provision of information, advice, and companionship (Sessions Goulet, 2012). Patients with diabetes and their family and friends requested advice, received emotional support, and often shared unsolicited information on diabetes through Facebook (Greene, Choudhry, Kilabuk, & Shrank, 2011). People with cancer employed Facebook for fundraising, patient and caregiver support, and informational support (Bender, Jimenez-Marroquin, & Jadad, 2011). Furthermore, Stefanone et al. (2012) examined the relationships between social media use and social support mobilization to reveal that frequency of Facebook use was the strongest predictor of social support reception, even stronger than emotional closeness. Overall, these studies illustrate that active Facebook use can promote supportive interactions among individuals.

The Role of Strong Ties in Social Support Exchange

Social ties are conduits of several types of social support, although strong ties and weak ties can play disparate roles in social support exchange (Lin & Westcott, 1991). The strength of a tie is determined by a combination of amount of time, emotional intensity, intimacy, and reciprocal services (Granovetter, 1973). Whereas weak ties are considered channels for nonredundant information, strong ties are characterized by credibility, influence, and a willingness to provide immediate help (Granovetter, 1983);

thus, social support has been understood as the functions performed typically by strong ties (Thoits, 2011).

Although researchers have employed terms such as primary ties, strong ties, and core networks, a number of studies have concluded that close relationships are the most effective resources for social support. Lin, Woelfel, and Light (1985) show that access to social support is positively related to strong and homophilous ties, rather than weak and heterophilous ties, as well as network density, meaning a higher level of interactions. Strong ties are greater motivators of assistance and provide comfort in the face of uncertainty (Krackhardt, 1992). Also, Pearlin, Lieberman, Menaghan, and Mullan (1981) suggested that the quality of relations, marked by intimate communication, trust, and solidarity, are critical in acquiring access to social support. Investigating the ways in which core networks help individuals garner social support, Hurlbert, Hains, and Beggs (2000) showed that individuals embedded in core networks with higher density and greater diversity activate their core ties to a greater degree than others to mobilize social support. Stefanone et al. (2012) extended this inquiry to social media contexts to reveal that strong ties and Facebook communication frequency are positively associated with enacted social support. Overall, these studies agreed that closer relationships can play a significant role in offering social support.

Based on the aforementioned literature, this study delves into whether social media use can affect the amount of social support received. In particular, this study isolates social support received through social media from social support received via other channels (e.g., face-to-face, phone calls) to delve into the role of social media in social support exchange. Also, tie strength is added to the model to examine the extent to which social media affects the reception of social support. Thus, the hypotheses are proposed as follows.

H1: Intensity of Facebook use is positively associated with the amount of social support received through Facebook.

H2: Intensity of Facebook use is positively associated with the amount of social support received by means other than Facebook.

Mediated Social Support and Subjective Well-Being

Scholars have reported that online social support is related to positive health outcomes such as a lower level of perceived life stress (Wright, 1999) and better coping and lower depression (Beaudoin & Tao, 2007). Also, although it was uncertain that mediated social support actually improved health conditions, recipients perceived mediated social support as beneficial and comforting (Vicary & Fraley, 2010). As Rains and Young (2009) discussed, the extant literature displays mixed findings regarding the health outcomes of online social support; however, their meta-analysis of 28 studies concluded that participation in a mediated support group generally leads to increased social support, decreased depression, increased quality of life, and increased self-efficacy in managing one's health condition.

Regarding social media, Facebook use is positively related to people's life satisfaction (Valenzuela, Park, & Kee, 2009); moreover, Facebook users with lower levels of life satisfaction and self-esteem gain greater benefit from Facebook use than others in terms of social capital (Ellison, Steinfield, &

Lampe, 2007). Individuals who have more Facebook friends experience reduced stress, less physical illness, and greater well-being (Nabi et al., 2013). This study extends this inquiry to delve into the association between online social support and subjective well-being compared with social support delivered by other means. This study focuses on life satisfaction, inter alia, which has been viewed as an important dimension of mental and psychological health and a measure for general health status applicable to a wide range of populations (Headey et al., 1993; McDowell, 2006). The associations between received social support and life satisfaction are hypothesized as follows:

H3: The amount of social support received through Facebook is positively associated with life satisfaction.

H4: The amount of social support received by means other than Facebook is positively associated with life satisfaction.

Method

Data Collection

An anonymous online survey was conducted in undergraduate classes at a large eastern university in April 2011. A variety of classes were selected to ensure as heterogeneous a population as possible, drawing students from different majors and academic years. Participants were informed that the study was anonymous, participation was voluntary, and individual responses would not be disclosed. The researcher was not the course instructor; however, participants were granted extra credit as compensation by their instructor. Of 934 students contacted, 626 participants completed the online survey, yielding a 67.02% completion rate.

Participant Demographics and Network Size

Among 626 participants, 62% (N = 388) were female and 38% (N = 238) were male. The mean age was 20 (SD = 1.96). In addition to age and gender, the number of strong ties (or core network size) was assessed following the approach developed by McCarty, Killworth, Bernard, Johnsen, and Shelley (2001). This measure asks respondents to calculate the number of people they know in specific relational categories. In this study, participants were asked to identify "very close" people among family, friends, coworkers, group members (e.g., sororities, fraternities, sport groups), neighbors, and others, respectively. The sum of these numbers provided the overall core network size (see also Boase, Horrigan, Wellman, & Rainie, 2006). The total number of strong ties including family members had a mean of 20.94 (SD = 14.06).[2] On average, participants reported 7.63 friends, 6.29 family members, 3.57 group members, 1.35 coworkers, 1.25 neighbors, and 1.06 others as strong ties. When family members were excluded from the number of strong ties, the mean was 14.70 (SD = 11.64).

Measures

[2] This statistic is similar to the results of Rainie, Horrigan, Wellman, and Boase (2006).

Facebook Use. An adapted version of the Facebook intensity scale (Ellison, Steinfield, & Lampe, 2007) was used to capture different aspects of Facebook use patterns. Among the items in the original scale, those that measured the extent to which Facebook was integrated into daily life, the number of Facebook friends, and Facebook use were included in this study.[3] Regarding Facebook use, however, instead of time spent on Facebook, frequencies of fixed and mobile Facebook use were assessed in a manner similar to measuring Internet use. Frequencies of Facebook use closely resembled those of Internet use, indicating that Facebook use was one of the participants' major online activities (see Table 1). Cronbach's alpha of the adapted scale was 0.82 (see Table 2).

Table 1. Descriptive Statistics for Internet Use.

	Mean or % (N)	**SD**
Duration of Internet use (years)	10.51	2.94
Number of Internet-enabled devices in use	2.39	1.03
Mobile Internet use	72.2% (452)	
Yes		
Frequency of fixed Internet use[1]	5.08	0.98
Frequency of mobile Internet use[1]	4.07	1.45
Facebook use	97.8% (612)	
Yes		
Frequency of fixed Facebook use[1]	4.5	1.2
Frequency of mobile Facebook use[1]	3.63	1.61

[1] Participants were asked to rate the frequency using a 5-point scale: 0 = Never, 1 = A few times per month, 2 = A few times per week, 3 = Once a day, 4 = 2 to 5 times a day, 5 = 6 to 10 times a day, 6 = More than 10 times a day.

[3] The number of Facebook friends is weakly correlated with the number of strong ties ($r = 0.21$, $p < 0.01$). Given this weak relationship, the number of Facebook friends is not removed from the scale although the number of strong ties is a control variable.

Table 2. Summary Statistics for Facebook Intensity Scale.

Facebook Intensity Scale (Cronbach's alpha = 0.82)[1]	**Mean – 0.0004**	**SD 0.72**	**Factor Loadings[3]**
About how many Facebook friends do you have? 0 = 10 or less, 1 = 11 to 100, 2 = 101 to 200, 3 = 201 to 300, 4 = 301 to 400, 5 = 401 to 500, 6 = more than 500	5.00	1.41	0.407
About how often do you access Facebook in the place where you live? 0 = Never, 1 = A few times per month, 2 = A few times per week, 3 = Once a day, 4 = 2 to 5 times a day, 5 = 6 to 10 times a day, 6 = More than 10 times a day	4.50	1.20	0.769
About how often do you access Facebook outside of your place or on the move? 0 = Never, 1 = A few times per month, 2 = A few times per week, 3 = Once a day, 4 = 2 to 5 times a day, 5 = 6 to 10 times a day, 6 = More than 10 times a day	3.63	1.61	0.607
Facebook is part of my everyday activity.[2]	4.17	1.05	0.887
Facebook has become part of my daily routine.[2]	4.15	1.07	0.890
I feel out of touch when I haven't logged onto Facebook for a while.[2]	3.51	1.20	0.736

[1] Individual items were standardized before analysis.

[2] Response categories ranged from 1 = strongly disagree to 5 = strongly agree.

[3] The scale was confirmed as a unidimensional measure.

Received Social Support. The Inventory of Socially Supportive Behaviors (ISSB), which is a 40-item scale, was selected to assess the frequency of experiences of supportive actions from others (Barrera, Sandler, & Ramsay, 1981). As ISSB measures the frequencies of enacted support rather than available support or social ties, it can be used with network variables such as number of strong ties. Furthermore, ISSB allows the researcher to assess the amount of support experienced in different venues or environments as it is a behavioral measure. The present survey was designed to distinguish supportive behaviors through Facebook and those by other means (e.g., face-to-face conversations, mobile phone calls or texts) to isolate social support via social media from other means. Each item on ISSB asks about the number of times participants were provided with social support in the preceding month, focusing on supportive behaviors they experienced in daily situations. Participants were instructed to measure the frequency of each type of social support received through Facebook and by other means separately.

ISSB aims to capture varied dimensions, including informational, emotional, appraisal, network, and instrumental social support. In this study, behaviors that cannot be performed in online contexts (i.e., instrumental or tangible support) were removed from the scale, concentrating only on emotional and informational support. This approach contributed to prevention of survey fatigue, which increases missing values, given that ISSB was employed for two different contexts (Facebook and other channels). After factor analyses and reliability tests were conducted to confirm the underlying relationships (Fabrigar, Wegener, MacCallum, and Strahan, 1999), 11 of the 13 items remained in the scale. The two dropped items were "Communicated with you about some interests of yours" and "Appreciated something you did well." Indeed, these two items may be considered general communication behaviors rather than indicating delivery of particular social support. Cronbach's alpha of each scale was very good ($\alpha = 0.94$ for Facebook, $\alpha = 0.91$ for other means). After these two items were removed, factor analyses using varimax rotation also confirmed that only one component was extracted, which indicated the scale could be used as a unidimensional measure (see Tables 3 and 4).

Table 3. Summary Statistics for ISSB Scale (Facebook).

ISSB (Facebook)[1] **(Cronbach's alpha = 0.94)**	**Mean** **29.91**	**SD** **9.55**	**Factor Loadings**
Expressed esteem or respect for a competency or personal quality of yours	2.88	1.11	0.728
Suggested some actions/ideas that can be helpful for you	2.80	1.16	0.785
Agreed that what you wanted to do was right	2.66	1.13	0.797
Let you know that she/he will always be around if you need assistance	2.59	1.15	0.800
Expressed interest and concern in your well-being	2.80	1.14	0.746
Let you know what to expect in a situation that was about to happen	2.59	1.15	0.801
Joked and kidded to try to cheer you up	3.26	1.67	0.744
Gave you some information on how to do something	2.75	1.14	0.811
Gave you some information to help you understand a situation you were in	2.53	1.16	0.831
Let you know what she/he did in a situation that was similar to yours	2.46	1.17	0.816
Let you know that you are OK just the way you are	2.23	1.16	0.743

Table 4. Summary Statistics for ISSB Scale (Other Means).

ISSB (Other Means)[1]	**Mean**	**SD**	**Factor Loadings**
(Cronbach's alpha = 0.91)	**36.09**	**8.63**	
Expressed esteem or respect for a competency or personal quality of yours	3.22	1.01	0.701
Suggested some actions/ideas that can be helpful for you	3.28	1.07	0.708
Agreed that what you wanted to do was right	3.23	1.02	0.734
Let you know that she/he will always be around if you need assistance	3.26	1.10	0.753
Expressed interest and concern in your well-being	3.47	1.11	0.711
Let you know what to expect in a situation that was about to happen	3.21	1.11	0.747
Joked and kidded to try to cheer you up	3.67	1.08	0.684
Gave you some information on how to do something	3.43	1.01	0.708
Gave you some information to help you understand a situation you were in	3.28	1.04	0.784
Let you know what she/he did in a situation that was similar to yours	3.07	1.07	0.791
Let you know that you are OK just the way you are	2.89	1.23	0.694

[1] Participants were asked to rate the frequency during the preceding month using the following 5-point scale: 1 = Not at all, 2 = Once or twice, 3 = About once a week, 4 = A few times a week, and 5 = About every day.

Life Satisfaction. The Satisfaction with Life Scale (SWLS) measured global life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). The scale includes five items designed to assess the level of subjective well-being. All items were measured based on a five-point Likert-type scale (see Table 5). The level of global life satisfaction was obtained by adding the value of all items (mean=16.44, SD=3.90).

Table 5. Summary Statistics for SWLS.

SWLS [1]	**Mean**	**SD**
(Cronbach's alpha = 0.84)	**16.44**	**3.90**
In most ways my life is close to my ideal.	3.24	0.96
The conditions of my life are excellent.	3.35	0.94
I am satisfied with my life.	3.54	0.97
So far I have gotten the important things I want in life.	3.37	1.01
If I could live my life over, I would change almost nothing.	2.94	1.14

[1] Response categories ranged from 1 = strongly disagree to 5 = strongly agree.

Control variables. Control variables were identified based on the existing literature to examine whether the effect of social media use is still statistically significant when other factors are controlled. Studies suggest that individuals with a larger core network, females, and younger people are likely to receive a larger amount of social support (Hains, Hurlbert, & Beggs, 1996; Hurlbert, Hains, & Beggs, 2000; Wellman & Wortley, 1990). Thus, the size of the core network (i.e., the number of strong ties), gender, and age were controlled when testing the first set of hypotheses of social support.

Internet use was additionally included in testing the second set of hypotheses as it had been discussed as a factor that may affect psychological well-being. Given that the population sample of this study consisted of active users, the researcher created two categories (fixed and mobile), instead of assessing Internet use at once, to help subjects' recall and enhance measurement accuracy. The distinction between fixed and mobile Internet use is not based on technical characteristics but on location: Fixed Internet use meant the Internet was used at home or in the dormitory, while mobile Internet use indicated Internet use in other locales or on the move. Furthermore, this provided a general sense of college students' Internet usage patterns; namely, the frequencies indicated whether participants stay connected to the Internet on the move, meaning Internet use had become part of their day-to-day activities. Descriptive statistics demonstrated that participants accessed the Internet frequently on the move (2–5 times daily) although they tended to use the Internet more in the place of residence (6–10 times daily). Taken together, this suggests that Internet use was an important part of participants' daily routine.

Analysis

Regression analyses were conducted to test proposed hypotheses. In terms of the first set of hypotheses, the effect of Facebook use on the amount of received support was investigated when controlling for the number of strong ties, gender, and age. In testing the second set of hypotheses about the effect of social support through Facebook on life satisfaction, Facebook use and Internet use were additionally controlled because these variables may affect the level of mental well-being as discussed.

Results

Descriptives on Social Support via Facebook

Descriptive statistics of received social support reveal that participants used Facebook as an important venue for social support exchange. As seen in Table 3, participants regularly received various forms of social support through Facebook. The mean of the amount of social support through Facebook (mean = 29.91, SD = 9.55) is smaller than the amount of social support from all other means (mean = 36.09, SD = 8.63); however, the results clearly indicate that Facebook had become a significant tool for social support exchange, given its considerably high mean value.

Facebook Use and Social Support Reception

As reported in Table 6, Facebook use has a greater impact on social support reception than the number of strong ties ($\beta = 0.27$, $p < 0.001$). Gender does not affect the amount of social support through Facebook, but age is negatively associated with received social support, albeit the effect is statistically not significant ($\beta = -0.07$, $p < 0.10$). Although this is a weak association, this result is still interesting given the small age variation of the participant sample. It may imply that younger students incorporate Facebook use more into their daily routines to exchange supportive messages online. In sum, H1 is supported.

Second, Facebook use does not display a significant effect on social support received by other means, indicating that Facebook-enabled communication does not facilitate supportive interactions happening outside Facebook. Thus, H2 is not supported. However, the number of strong ties ($\beta = 0.22$, $p < 0.001$) and gender ($\beta = -0.13$, $p < 0.01$) had a significant effect on social support received by other means, echoing existing findings (Hurlbert, Hains, & Beggs, 2000; Wellman & Wortley, 1990). Women and people with more strong ties are more likely to receive social support than others when they are using various modes of communication such as face-to-face or mobile phones.

Table 6. Regressions Predicting the Amount of Received Social Support.

	H1 **Social support on Facebook**	**H2** **Social support by other means**
Facebook intensity	0.27^{***}	0.05
Number of strong ties	0.23^{***}	0.22^{***}
Gender Female = 0	−0.02	-0.13^{**}
Age	-0.07^{+}	−0.05
F	29.56***	12.82***
Adjusted R^2	0.16	0.07

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Social Support on Facebook and Life Satisfaction

The results of the regression analysis are displayed in Table 7. Analyses demonstrate that social support received through Facebook has no significant effect on life satisfaction, rejecting H3. By contrast, social support received by other means is positively associated with life satisfaction ($\beta = 0.12$, $p < 0.01$). Hence, H4 is supported, implying that support via Facebook does not necessarily lead to promotion of mental health, whereas other kinds of support may have positive impacts. Nonetheless, the results do not explain much about the variance in life satisfaction. This is unsurprising, given that life satisfaction is determined by a variety of factors such as social ties (Kahneman & Krueger, 2006), personality (Francis, 1999), communication frequency (Diener, Sandvik, & Payot, 1991) as well as the amount of social support (Leung & Lee, 2005).

Table 7. Regressions Predicting Life Satisfaction.

	H3	**H4**
	Life Satisfaction	
Social support on Facebook	0.01	
Social support by other means		0.12**
Facebook intensity	0.07	0.07
Fixed Internet use	−0.11*	−0.11*
Mobile Internet use	0.03	0.03
Number of strong ties	0.21***	0.20***
Gender Female = 0	0.01	0.02
Age	−0.01	−0.01
F	5.63***	6.93***
Adjusted R^2	0.05	0.06

* $p < 0.10$, ** $p < 0.01$, *** $p < 0.001$.

Discussion

This study examined the role of Facebook use in social support exchange as well as associated health implications to confirm that Facebook use facilitates supportive interactions rather than attenuating interpersonal relationships. The findings reveal that Facebook is a significant source of social support for college-aged adults: The intensity of Facebook use contributes to the reception of social support significantly greater than the number of strong ties. Given that social media allow individuals to stay connected to a wider range of networks, social media can be a useful means of sharing one's needs with different social groups that potentially aid in resource acquisition. Nonetheless, this study does not find statistical evidence for the impact of mediated social support on the level of life satisfaction, leading to further inquiries about the health implications of Facebook use.

Specifically, the implications of this study are three-fold. First, it is worth highlighting that Facebook use was a more influential factor than the number of strong ties in garnering social support. This suggests that people who have a smaller network may benefit from active use of social media, which enables them to reach out to others and mobilize support with relatively less effort, particularly in times of need. In addition, network size should be understood in conjunction with other factors that may affect social support reception, which calls for further research. Demonstrating that large or diverse networks do not necessarily predict societal well-being, Hampton and Ling (2013) reject the taken-for-granted notions of the advantages of a large network and frequent in-person contacts. As such, a nuanced approach is needed when investigating the effects of media use and interpersonal networks on support reception and mental well-being.

Second, the findings provoke an interesting inquiry about the role of gender in supportive communication online. According to the results, there is no significant difference between women and men

in terms of the amount of social support received through Facebook; however, women tend to receive more social support when using other means. Studies have confirmed that women are more likely to show supportive behaviors (Trobst, Collins, & Embree, 1994; Wellman & Wortley, 1990) and to seek social support (Ashton & Fuehrer, 1993) compared with men. In a similar vein, men are less likely to focus on emotions and to undertake the task of providing support when confronted with a distressed person (Burleson, Holmstrom, & Gilstrap, 2005). The current study reinforces previous findings when it comes to social support exchange outside of Facebook (e.g., face-to-face). However, this study reveals that gender difference was mitigated and ineffective on Facebook, which implies that mediated environments may offer men an opportunity to engage in interpersonal interactions without the psychological burdens related to social support exchange (High & Caplan, 2009).

Third, the health implications of media use must be understood in light of the properties of the social fabric to which individuals belong. According to the results, social support on Facebook has no significant relationship to life satisfaction. This finding is germane to the nature of Facebook communication, which is open to a wider social circle and often extended to public communication. Given that supportive communication is concerned in many cases with sensitive topics, profound conversations may occur in more private contexts through other channels. And whereas Facebook use certainly increases the amount of social support, it is not necessarily connected to the quality of social support despite its potential. There is also a possibility that social support received in the moment does not necessarily lead to improved life satisfaction, although it certainly is a temporary coping aid. Thus, the level of life satisfaction can be explained by more sustained, long-term support. Echoing this, the size of one's core network, which includes enduring ties, consistently has a positive effect on life satisfaction in this study. Furthermore, the analyses reveal that fixed Internet use shows a negative association with life satisfaction, whereas mobile Internet use has no such effect. As Ishii (2004) argues, mobile Internet use has positive effects on sociability, whereas fixed Internet use does not. This study echoes this finding, implying that Internet use on the move or in social surroundings may contribute to interpersonal interactions. Although this study cannot claim the causality of these relationships, the findings suggest that Internet use behaviors can be better understood in context. Rather than handling technology use as a single variable, considering different contexts may allow for a closer examination and a deeper understanding of the social outcomes of media use. In this regard, this study calls for more nuanced approaches that consider various contexts to make sense of complicated patterns of media use and their implications (see Hampton, Sessions, & Her, 2011; Hampton, Sessions Goulet et al., 2011).

Limitations and Future Research

As with any study, there are limitations in this research. First, this study looks only into college students' Facebook use. Although this group is one of the dominant populations on Facebook, future research would benefit from inviting diverse populations, such as older adults or teenagers, who may follow different usage patterns, to enhance the generalizability of the results. Second, Facebook non-users can be included to further examine whether social support received through Facebook is an addition to in-person social support or a replacement of it (e.g., whether non-users obtain a similar level of social support). A comparative study of Facebook users and non-users would shed light on the nature of

supportive communication and the role of social media in social support exchange. Third, a closer investigation of the characteristics of mediated social support is needed. What are motivations for using Facebook to solicit and provide social support? How do people evaluate and make sense of mediated social support? In particular, given that social support through Facebook did not contribute to mental well-being in this study, research on support strategies and outcomes may offer explications of the psychological dynamics of supportive communication online. In this regard, different purposes of social media use and specific use patterns (e.g., commenting behaviors, Facebook group use, "friending" patterns) can be included in the analysis to elucidate detailed relationships between Facebook use and its effect on supportive communication. For instance, different activities on Facebook can have varied levels of contribution to social support reception (Hampton et al., 2012); thus, further examination of use strategies and behaviors of Facebook members may allow for a better understanding of which mechanisms of Facebook use promote supportive relationships and psychological well-being.

Conclusion

Taken together, this study underlines the role of social media use in promoting the acquisition of social aids by demonstrating how Facebook use enables people to obtain various kinds of social support. Frequent occurrences of supportive communication on Facebook clearly indicate that individuals can benefit from the active use of social media. Once incorporated into daily routines, social media use can significantly contribute to lubricating interpersonal communication and diversifying strategies for providing and receiving social support. To examine these processes, it is crucial to delve into the content and contexts of use instead of assessing the frequency of use in general. Based on this perspective, this study focused on supportive communication on social media as well as different contexts of Internet use. The results highlight the importance of varied contexts of social support exchange, which may lead to different health outcomes. As such, this study calls for further investigations of the social and health implications of different patterns of new media use.

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