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Social Media Use and Perceived Emotional Support Among US Young Adults

Ariel Shensa[1,2] · Jaime E. Sidani[1,2] · Liu yi Lin[1] · Nicholas D. Bowman[4] · Brian A. Primack[1,2,3]

Abstract Low emotional support is associated with poor health outcomes. Engagement with face-to-face social networks is one way of increasing emotional support. However, it is not yet known whether engagement with proliferating electronic social networks is similarly associated with increased emotional support. Thus, the purpose of this study was to assess associations between social media use and perceived emotional support in a large, nationally-representative sample. In October 2014, we collected data from 1796 U.S. adults ages 19–32. We assessed social media use using both total time spent and frequency of visits to each of the 11 most popular social media platforms. Our dependent variable was perceived emotional support as measured by the brief Patient-Reported Outcomes Measurement Information System (PROMIS) emotional support scale. A multivariable model including all sociodemographic covariates and accounting for survey weights demonstrated that, compared with the lowest quartile of time on social media, being in the highest quartile (spending two or more hours per day) was significantly associated with *decreased* odds of having higher perceived emotional support (AOR 0.62, 95 % CI 0.40, 0.94). However, compared with those in the lowest quartile, being in the highest quartile regarding frequency of social media use was not significantly associated with perceived emotional support (AOR 0.70, 95 % CI 0.45, 1.09). In conclusion, while the cross-sectional nature of these data hinder inference regarding directionality, it seems that heavy users of social media may actually feel less and not more emotional support.

Keywords Emotional support · Social media · Social networks · PROMIS (patient reported outcomes measurement information system) · Nationally-representative data · Young adults

✉ Ariel Shensa
shensaa@upmc.edu

[1] Division of General Internal Medicine, Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

[2] Center for Research on Media, Technology, and Health, University of Pittsburgh, 230 McKee Place Suite 600, Pittsburgh, PA 15213, USA

[3] Division of Adolescent Medicine, Department of Pediatrics, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

[4] Department of Communication Studies, West Virginia University, Morgantown, WV, USA

Introduction

Low emotional support has been associated with poor physical and mental health outcomes and increased overall mortality risk [1–5]. Increased emotional support is also a protective factor for vulnerable populations against negative health outcomes such as pre- and postnatal maternal depression [6], stress, anxiety, and depression in HIV-positive men [7], and increased survival rates among African-American and White breast cancer patients [8]. While demographic characteristics such as age and gender moderate the relationship between emotional support and well-being [9, 10], emotional support is consistently associated with an overall beneficial effect on health [11].

One of the most effective ways of increasing emotional support is through social network affiliation [12, 13]. For example, a 20-year longitudinal study found that one's happiness depends on the happiness of other individuals with whom they are connected [14]. Similarly, results from

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Table 1 Whole sample characteristics and bivariable associations with perceived emotional support (N = 1785)

Independent variables	Whole sample[a]	Perceived emotional support[a]		*p* value[b]
		Low (n = 1096)	High (n = 689)	
Social media use				
Time per day, min				.06
Q1 (0–30)	29.8	27.8	32.8	
Q2 (31–60)	20.8	19.2	23.3	
Q3 (61–120)	24.0	24.6	23.0	
Q4 (121 and above)	25.5	28.5	20.8	
Site visits per week[c]				.64
Q1 (less than 9)	28.3	27.1	30.2	
Q2 (9–30)	25.1	25.4	24.6	
Q3 (31–57)	24.1	23.6	24.8	
Q4 (58 and above)	22.5	23.9	20.4	
Sociodemographic				
Age, years				.16
19–23	33.7	31.3	37.4	
24–26	24.8	24.8	24.7	
27–32	41.6	43.9	37.9	
Sex				.91
Female	50.3	50.5	50.0	
Male	49.7	49.5	50.0	
Race				.004
White, non-Hispanic	57.5	53.3	63.9	
Black, non-Hispanic	13.0	12.7	13.4	
Hispanic	20.6	22.2	18.1	
Other[d]	8.9	11.8	4.6	
Relationship status				<.001
Single[e]	44.5	51.1	34.1	
In a committed relationship[f]	55.6	48.9	65.9	
Living situation				.10
Parent/guardian	34.0	34.9	32.7	
Significant other	35.6	32.7	40.1	
Other[g]	30.4	32.5	27.2	
Household income				.047
Low (under $30,000)	22.9	25.9	18.2	
Medium ($30,000–$74,999)	38.4	36.7	41.2	
High ($75,000 and above)	38.7	37.5	40.6	
Education level				.24
High school or less	36.0	37.3	33.8	
Some college	38.3	39.0	37.2	
Bachelor's degree or higher	25.7	23.7	29.0	

[a] Values may not total 100 due to rounding. Column percentages are based upon survey weighted data, therefore may not be congruent with the cell frequency proportion of total N

[b] *P* value derived using Chi square analyses comparing proportion of users in each category

[c] Includes Facebook, Twitter, Google+, YouTube, LinkedIn, Instagram, Pinterest, Tumblr, Vine, Snapchat, and Reddit

[d] Includes multiracial

[e] Includes widowed, divorced, and separated

[f] Includes engaged, married, and in a domestic partnership

[g] Defined as not living with a parent/guardian or significant other

a 32-year longitudinal study indicated that positive health behaviors appear to spread via social ties in a large social network [15]. Moreover, a study on religiosity and life satisfaction offered strong evidence that increased life satisfaction stems from the social aspects involved in religious identity such as building congregational social networks [16].

With the substantial increase of Internet and social media use in the 21st century, opportunities for connectedness and support have become more plentiful yet more complex. From 2005 to 2013, the percentage of online adults ages 18–29 who use social media has increased from 9 to 90 %, with over 74 % of all online adults currently reporting social media use [17]. It may be that electronic social networks mimic face-to-face social networks, which are known to increase emotional support. Consistent with this, some findings suggest that larger social networks and perceived audiences predict higher levels of life satisfaction [18]. Similarly, greater intensity of social network use has been associated with increased social capital [19, 20]. Additionally, in a study assessing Facebook user responses, positive emotions were found to be more prevalent than negative emotions, suggesting Facebook use may be associated with happiness [21]. Furthermore, another recent study of Facebook found that users report higher perceived emotional support than other internet users of similar demographic characteristics [22]. One possibility for social media's potential positive impact on emotional support is the medium's ability to help foster both strong and weak social ties [23]. These ties may be important for emotional strength or securing novel sources of information, depending upon the strength of the tie [24]. Others have argued that social media usage creates an ambient awareness among users, keeping them loosely aware of each other's day-to-day social activities [25], which may also enhance a user's perception of emotional support.

However, increased online social media use may not necessarily translate into increased emotional support. For example, results from one study suggested that total time spent on social media and a larger online social network was neither associated with having a larger *offline* network nor with feeling emotionally closer to one's offline networks [26]. Additionally, a literature review of 43 empirical studies found that—while most individuals are initially motivated to use social media sites to stay connected with established offline social networks—increased use was associated with a decrease in real life social community, lower academic achievement, as well as relationship problems [27]. Furthermore, findings from another recent study indicated that—while online social networking was weakly associated with decreased depression—social support from Facebook had less of an association with reduced depression than did face-to-face social network support [28]. Some have argued that social media use may be disruptive in that it pulls individuals away from their physical surroundings, including people who occupy that space. This may result in displacement or a tension of attention [29, 30].

It is important to note that the above-mentioned often conflicting studies were limited in several respects. For example, these studies nearly all used relatively small convenience samples and/or focused on youth [19, 20, 31]. Due to the ubiquitous nature of social media use, including use by young adults [32], it would be valuable to study associations between social media use and perceived emotional support in a large national sample more generalizable to the population of U.S. users. Prior studies also generally assessed social media using a single platform (e.g., Facebook) [18, 21, 28, 31]. However, multi-platform use is on the rise, with 52 % of online adults and 71 % of teens using two or more social media sites [32]. Hence, it would be beneficial to assess social media use more comprehensively. According to Glanz, Rimer, and Viswanath, both social network and social support are inter-related theoretical constructs within a larger conceptual model of health behavior and health outcomes [12]. Therefore, the purpose of this study was to assess associations between social media use and perceived emotional support in a large, nationally-representative sample of young adults. Based on prior literature [18–22] and theory [12], we hypothesized that increased social media use would be associated with greater perceived emotional support.

Methods

Participants and Procedures

Participants were recruited from a nationally-representative probability-based online non-volunteer access panel known as the KnowledgePanel®. This panel, which consists of approximately 55,000 members ages 18 and older, is recruited and maintained by Growth from Knowledge (GfK) [33]. It was populated through both address-based sampling and random digit dialing, allowing for a sampling frame that covers approximately 97 % of U.S. households [33]. Panel members are invited to participate in web-based surveys via personal or GfK-provided e-mail addresses. In March–April 2013, a total of 3254 panel members ages 18–30 (response rate = 54 %) completed a web-based survey about various health behaviors. In October 2014, GfK sent a follow-up survey about these and other health behaviors to the 3254 panel members who had completed the baseline survey, who were then ages 19–32. Those who completed the surveys were given a $15 cash-equivalent incentive. Data from the current study were collected as

part of this follow-up wave of the longitudinal study; baseline data were not used because social media use and the dependent variable of perceived emotional support were not collected at that time. This study was approved by the University of Pittsburgh Institutional Review Board and was granted a Certificate of Confidentiality from the National Cancer Institute at the National Institutes of Health.

Measures

Perceived Emotional Support (Dependent Variable)

We assessed perceived emotional support using a 4-item scale developed by the Patient-Reported Outcomes Measurement Information System (PROMIS). PROMIS is a National Institutes of Health (NIH) Roadmap initiative aiming to provide precise, reliable, valid, and standardized questionnaires measuring patient–reported outcomes across the domains of physical, mental, and social health [34–36]. The PROMIS emotional support item bank specifically aims to assess perceived feelings of being cared for and valued as a person [37]. Participants were presented with the following items: "I have someone who will listen to me when I need to talk"; "I have someone to confide in or talk to about myself or my problems"; "I have someone who makes me feel appreciated" and "I have someone to talk with when I have a bad day." Each item was followed by a Likert-type response scale with possible responses of *Never (1), Rarely (2), Sometimes (3), Often (4), and Always (5).* We calculated a raw summary score ranging from 4 to 20, using only the respondents who answered all 4 items. Because of the non-normal distribution of the data, the outcome was treated as categorical instead of continuous. While our original analytic plan involved collapsing the dependent variable into tertiles, this was ultimately not appropriate because of violation of the proportional odds assumption [38]. Therefore, the most appropriate way to operationalize this variable for primary analyses was dichotomously into low and high categories based upon the distribution of the data.

Social Media Use (Independent Variables)

Social media use was assessed with multiple items developed to capture use in terms of both total time spent on social media and frequency of use. The first item asked participants to estimate total time per day spent on social media for personal use. This item explicitly instructed participants to not include work-related use in their estimates. Participants were provided with open-ended boxes for hours and minutes, and total time was converted to minutes for analysis. Eleven subsequent items prompted participants to indicate how frequently they visit the following 11 social media platforms: Facebook, Twitter, Google+, YouTube, LinkedIn, Instagram, Pinterest, Tumblr, Vine, Snapchat, and Reddit. These platforms were selected based on their popularity with the young adult age group at the time of the study [32, 39]. Seven response categories were based on the Pew Research Center items [32] and included: *I don't use this platform* (0), *less than once a week* (1), *1–2 days a week* (2), *3–6 days a week* (3), *about once a day* (4), *2–4 times a day* (5), and *5 or more times a day* (6). This item was used to calculate participants' social media site visits per week (frequency) by converting the response categories into numeric averages based on a standardized unit of measurement rather than general frequency. For example, *1–2 days a week* was recoded as 1.5 site visits per week and *2–4 times a day* was recoded as 21 site visits per week. Both independent variables were collapsed into quartiles for primary analyses to improve the interpretability of results.

Socio-demographic Factors (Covariates)

GfK maintains certain socio-demographic information about panel members, including age, sex, race/ethnicity, household income, and education level. For this study, age was collapsed into three categories (19–23; 24–26; 27 and above) based on the distribution of the data. Race/ethnicity was divided into four categories (White, non-Hispanic; Black, non-Hispanic; Hispanic; Other, non-Hispanic), while household income and education level were each divided into three categories (low, under $30,000; medium, $30,000–74,999; high, $75,000 and above and high school or less; some college; bachelor's degree or higher, respectively). Relationship status (single; in a committed relationship) and living situation (with parent/guardian; with significant other; other) were obtained via self-report from participants.

Data Analysis

We included all participants who had complete data on the dependent variable (perceived emotional support). Because <1 % of participants had missing data for this variable, removal of incomplete data is unlikely to have affected our results. We first calculated descriptive statistics of the dependent variable, each of the 2 independent variables (time and frequency), and each of the 7 covariates.

We then used Chi square tests to determine bivariable associations between our dependent variable and each of our independent variables and covariates. We also used Chi square tests to assess bivariable associations between each covariate and each independent variable.

Table 2 Bivariable associations between sociodemographic covariates and time per day on social media for personal use

Covariate	Time per day, min[a]				*p* value[b]
	0–30	31–60	61–120	121+	
Age, years					<.001
19–23	26.7	27.6	37.2	43.3	
24–26	27.4	20.3	26.1	23.2	
27–32	45.9	52.1	36.8	33.5	
Sex					
Female	42.7	43.4	53.4	61.0	<.001
Male	57.3	56.6	46.6	39.0	
Race/ethnicity					
White, non-Hispanic	63.5	63.7	54.0	48.4	.13
Black, non-Hispanic	10.5	10.4	15.0	16.6	
Hispanic	16.5	17.3	23.3	25.4	
Other[c]	9.4	8.6	7.8	9.6	
Relationship status					.09
Single[d]	41.3	38.3	46.8	50.5	
Committed relationship[e]	58.7	61.7	53.2	49.5	
Living situation					.13
Parent/guardian	31.3	29.5	36.9	37.7	
Significant other	41.0	40.4	31.2	29.1	
Other[f]	27.7	30.1	32.0	33.3	
Household income					.17
Under $30,000	18.2	20.7	24.4	28.0	
$30,000–$74,999	41.4	36.2	41.4	34.1	
$75,000 and above	40.4	43.2	34.1	37.9	
Education level					.003
High school or less	31.9	26.3	38.4	45.0	
Some college	37.1	41.7	39.1	36.9	
B.A. or higher	31.0	32.0	22.5	18.2	

[a] Values may not total 100 due to rounding. Numerals represent column percentages

[b] *P* value derived using Chi square analyses comparing proportion of users in each category

[c] Includes multiracial

[d] Includes widowed, divorced, and separated

[e] Includes engaged, married, and in a domestic partnership

[f] Defined as not living with a parent/guardian or significant other

We then used logistic regression to determine bivariable and multivariable associations between each independent variable and our dependent variable. It was decided a priori to adjust for all sociodemographic variables in our primary multivariable models. Additionally, we used post-estimation orthogonal polynomial tests to examine the overall linear trend of each ordered categorical independent variable in relation to our dependent variable.

All primary analyses were conducted using survey weights provided by GfK in order to estimate effects for the general U.S. population. Statistical analyses were performed with Stata 12.1 [40], and two-tailed p values of $<.05$ were considered to be significant.

To examine the robustness of our results, we conducted three sets of sensitivity analyses. First, we conducted all multivariable analyses without survey weights. Second, we conducted all multivariable analyses using only a parsimonious set of covariates that had a bivariable association of $p < .10$ with the dependent variable. Third, we conducted all analyses with independent variables as continuous instead of ordered categorical variables.

Results

Participants

Our final sample consisted of 1785 individuals with only 11 (<1 %) omitted for incomplete data on our outcome variable. The sociodemographic characteristics of our sample are reported in Table 1.

Perceived Emotional Support

Individual items demonstrated high internal consistency with Cronbach's alpha = 0.96. Data for perceived emotional support were non-normal and heavily skewed right. The median score for perceived emotional support was 16 (interquartile range [IQR] = 12–20). As described above in the methods section, analysis of this variable as continuous was not viable because of non-normality and no appropriate transformation. Additionally, collapsing in tertiles was ultimately not appropriate because of violation of the proportional odds assumption [38]. Thus, perceived emotional support was dichotomized into "low" and "high" groups based on the distribution of the data and correspondence with T-scores. In particular, the 39 % of participants with raw scores of 19 or 20 were defined as "high" emotional support and the remaining 61 % were placed in the "low" category. These categories corresponded well with T-scores, which were recommended benchmarks for other PROMIS measures under conditions of normality. For example, our median score of 16 corresponded to a T-score of 49, which is only 1 point below the standardized mean of 50. Our "high" group, scores of 19 and 20, corresponded to T-scores of 55.6 and 62. These scores are equivalent to greater than half and greater than one standard deviations above the mean, respectively.

Social Media Use

Participants reported a median of 61 min (IQR = 30–135) for time per day on social media and a median of 30 (IRQ = 9–57) site visits per week. The lowest quartile for

Table 3 Bivariable and multivariable associations between social media use and perceived emotional support

Social media use	Perceived emotional support[a]			
	OR (95 % CI)	P^b	AOR[c] (95 % CI)	P^b
Time per day, min		.009		.02
Q1 (0–30)	1 [Reference]		1 [Reference]	
Q2 (31–60)	1.03 (0.69–1.54)		0.96 (0.65–1.42)	
Q3 (61–120)	0.79 (0.53–1.19)		0.78 (0.50–1.21)	
Q4 (121 +)	0.62 (0.41–0.92)		0.62 (0.40–0.94)	
Site visits per week[d]		.30		.18
Q1 (less than 9)	1 [Reference]		1 [Reference]	
Q2 (9–30)	0.87 (0.58–1.30)		0.77 (0.52–1.16)	
Q3 (31–57)	0.94 (0.63–1.42)		0.86 (0.56–1.33)	
Q4 (58 and above)	0.77 (0.50–1.17)		0.70 (0.45–1.09)	

OR odds ratio, *AOR* adjusted odds ratio, *CI* confidence interval

[a] Perceived emotional support is divided into 2 categories; the upper level representing greater support

[b] *P* value derived using orthogonal polynomial tests for trend

[c] Adjusted for age, sex, race, relationship status, living situation, household income, and education level

[d] Includes Facebook, Twitter, Google+, YouTube, LinkedIn, Instagram, Pinterest, Tumblr, Vine, Snapchat, and Reddit

time per day included 0–30 min; the second quartile included 31–60 min; the third quartile included 61–120 min; and the fourth and highest quartile included 121 or more minutes. For site visits per week, the lowest quartile included less than 9 site visits; the second quartile included 9–30; the third quartile included 31–57; and the fourth and highest quartile included 58 or more site visits.

Bivariable Analyses

We found no significant associations between any of the social media use variables and perceived emotional support. However, bivariable analyses did show significant associations between race/ethnicity, relationship status, and household income and perceived emotional support (p ranging from <.001 to .05) (Table 1). Bivariable analyses also showed significant associations between three covariates (age, sex, and education level) and time per day on social media (p ranging from <.001 to .003) (Table 2). Only age showed a significant association with site visits per week ($p < .001$) (data not shown).

Multivariable Analyses

In fully-adjusted multivariable models, respondents in the highest quartile of time per day on social media had significantly decreased odds of high perceived emotional support (AOR 0.62; 95 % CI 0.40–0.94). There was no significant association between site visits per week and perceived emotional support (AOR 0.70; 95 % CI 0.45–1.09) (Table 3).

Post-estimate tests using orthogonal polynomials showed significant linear trends for time per day with perceived emotional support ($p = .02$), whereas site visits per week did not ($p = .18$) (Table 3). Results from all sensitivity analyses were consistent with those from primary analyses.

Discussion

This study of a nationally-representative sample of young adults found that participants who spend the most time per day on social media sites had significantly lower odds of reporting higher levels of perceived emotional support. Additionally, we found a significant linear trend between time and perceived emotional support; as time per day spent on social media increased, perceived emotional support decreased. A second independent variable, which quantified the frequency of social media visits per week, was not associated with perceived emotional support.

While there is conflicting literature on the association between social media use and feeling emotionally supported, our results are consistent with research that suggests that social media use may undermine subjective well-being [41] and be associated with factors counteractive to perceived emotional support such as loneliness [26, 42, 43] and depression [44]. However, they do not support the findings that state the psychological benefit of a social media presence presented in the literature review. While our study did not probe the psychological mechanisms underlying observed effects, some have argued that social

media platforms—despite their ability to help foster both strong (emotionally supportive) and weak (information-seeking) social ties [24]—can greatly disrupt the user's normal sense of place including the people in it [29, 30]. Moreover, social media platforms require users to constantly monitor and co-produce information with their peers, which might place additional strain on their cognitive, emotional, and social resources [45].

It is interesting to note that, while we found significant associations between increased *time* on social media and lower perceived emotional support, we did not find significant associations between increased *frequency* of use and lower emotional support. Because the point estimate was substantially below 1.0 (it was 0.7), it is possible that we simply did not have enough power for this result to be significant. However, it is also possible that total time spent is indeed more closely tied to lower perceived emotional support for other reasons. For example, this might support the "displacement hypothesis" whereby increased overall time on social media simply makes less time available for more beneficial face-to-face relationships. Similarly, because it is generally an acceptable social convention among young adults to check social media frequently—even when also engaging in an in-person social activity [30, 46]—this frequency may not interfere with benefits afforded by other social relationships. Conversely, it could also be the case that frequent social media checks are more functional than they are distracting. For example, one might make frequent checks of their Twitter or Facebook accounts throughout the day, but these checks could also be both short and performed in spaces otherwise free from social interaction. That is, one might share and view social media content that are valuable without being demanding. It would be beneficial for future studies to continue to examine potentially differential effects of time and frequency of use.

Because our data were cross-sectional, we could not infer temporality. One explanation of our overall findings may be that individuals who feel less emotionally supported in offline relationships subsequently spend more time on social media to fill this void. Alternately, it could be that individuals who first spend substantial time on social media subsequently feel less emotional support. This could be an effect of what is happening online or increased exposure to negative social support. For example, envy, fear of missing out, and contentious interactions with others may occur with increased time spent on social media and adversely affect one's perceived emotional support [47–50]. As noted above, increasing time spent online may also result in being less engaged in truly therapeutic face-to-face relationships and/or interactions. Regardless of directionality, however, it is an important and somewhat paradoxical finding that those with increased social media use tend to perceive less emotional support. Even if this is because individuals with low perceived emotional support subsequently spend increased time online, it is interesting that they do not seem to find the emotional support they lack in that medium. As is often the case, it may be that both directions are applicable—individuals with low perceived support spend more time online, which subsequently limits their ability to engage in more potentially valuable in-person activities that might better serve their emotional support needs. Qualitative work may be valuable in helping describe these types of complex processes, as well as longitudinal research such as cohort and panel designs.

It is important to note that we only assessed overall time and frequency, and that there are many qualitatively different ways of interacting on social media. For example, some individuals have more "passive" experiences by simply viewing posts; this is also known as browsing or lurking. However, other individuals have substantially more "active" experiences characterized by writing private messages, commenting, posting, and/or actively searching for old friends or acquaintances. It follows that users who actively engage content—co-creating their and others' stories through frequent and ritualized interactions—might see these spaces as vehicles for expression and social support [51]. Because the degree of passivity/activity may indeed be associated with ultimately feeling emotional support, it would be valuable for future work to assess the character of online interactions in a more fine-grained manner.

Similarly, there are a variety of different degrees of emotionality that can be experienced online. Some individuals may have only relatively benign interactions, while as noted above, others may tend to have aggressive interactions. Still others may be prone to "overshare," given the disinhibited nature of mediated social interaction. This phenomenon of over-sharing, especially among users with low self-esteem, ultimately can lead to negative responses from friends [52] and decreased relationship satisfaction [53]. One theoretical mechanism underlying these effects is that of communication privacy management, wherein social media users often and unintentionally violate their own boundary rules around content and information considered to be highly personal, but once divulged online becomes essentially public domain [54]. Because the specific ways in which individuals use social media was not measured in this study, these could be valuable areas for future research.

It was an important contribution of our study that we assessed social media broadly—using the 11 most popular platforms at the time—to measure frequency of use instead of using a single platform such as Facebook. This

will be even more important in the future, as multi-platform use among online adults increases about 10 % per year (Pew Research Center, 2015). While we did not find a significant association between overall frequency and perceived emotional support, there are other aspects of multi-platform use that may be interesting to assess in the future. For example, media multi-tasking, especially among adolescents, has been associated with negative cognitive and/or emotional outcomes [55–58]. It may therefore be interesting to determine if the diffusion of social media use across multiple platforms is an independent risk factor for negative outcomes such as lower perceived emotional support.

Limitations

As noted above, the cross-sectional nature of the study limits inference of directionality. Future longitudinal work may improve assessment of temporality. Additionally, although our study used a nationally-representative sample of young adults, these findings cannot be generalized to a younger or older population. It would be beneficial for future research to assess other populations. This includes older adult social media users, given this group's rapidly growing social media presence [32].

Another limitation of our study is that data were self-reported. However, we assured all participants that their responses were confidential and protected by a Certification of Confidentiality, making it unlikely responses would not be truthful.

Conclusion

This study of a nationally-representative sample of young adults found that individuals who spent more than two hours per day on any combination of the 11 most popular social media platforms had significantly decreased odds of reporting higher levels of perceived emotional support, even when controlling for a comprehensive set of related sociodemographic characteristics such as sex, relationship status, and living situation. Individuals with low perceived emotional support may subsequently spend more time on social media, social media users may paradoxically begin to feel lower emotional support, or both may be true. It would be valuable for future research to examine these associations longitudinally and to more carefully assess different types of social media interactions.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

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