

# Negotiating Social Belonging: Online, Offline, and In-Between

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## Abstract

*This study investigates contemporary college students' social behavior on- and offline. Although being socially active typically enhances access to resources embedded in social networks and improves student performance, the relative contributions of a range of social activities to students' social and academic lives remain unclear. Additionally, the broad adoption of communication technologies such as cell phones and Internet-based applications including social networking sites (SNSs) is changing the way people manage their social lives. In light of these changes, the current study explores the relationship between a variety of social activities, perceived support and performance outcomes. Results suggest that a range of activities significantly correlated with student outcomes. Mediated relationships via SNSs had a positive influence on perceived social support, whereas time spend communicating face-to-face demonstrated a positive relationship with satisfaction.*

## 1. Introduction

The college experience represents many things and is at least a significant transition period in people's lives as they move into new learning and living arrangements. This period is generally characterized by independent decision making especially for those who relocate to attend higher education institutions. In addition to new academic challenges, students are faced with a variety of hurdles including managing their free time and negotiating new relationships. Although Internet-based communication tools like social networking websites (SNSs) may reduce the costs of maintaining existing relationships, college students still must make many choices about their social involvement on campus.

Involvement may take many forms including studying, interacting with classmates and faculty

members, dating, and participating in school clubs or other extracurricular activities [1]. In general, high involvement enhances learning and improves academic performance because the effort directed at scholarly and informal interpersonal activities contributes to intellectual and social development [2]. In addition, out-of-class activities provide opportunities to acquire important skills that are not often addressed in the classroom (e.g., social ability) and may increase students' sense of community [3].

Hood [4] found that participation in organizational and recreational activities lead to mature and intimate relationships, suggesting that tolerance and acceptance of other's differences were developed by listening to and understanding different perspectives during conversations. However, scholars have noted that some group activities like membership in fraternities or sororities can have negative impacts on personal development [5]. As Kuh, Pascarella, and Wechsler [6, p. A68] suggest, "fraternities are indifferent to academic values and seem to short-change the education of many members."

Although the relationship between social involvement and academic performance remains equivocal, participation in social activities generally enhances access to resources embedded in social networks. Student involvement is probably most directly related to opportunities for the development and maintenance of social support networks. In order to increase the accessibility of traditional and networked social resources, college students may participate in a variety of activities to diversify their academic connections [7]. However, high involvement may not necessarily result in enhanced access to social support resources. One of the most important and difficult challenges students face is optimizing strategies which maximize the benefits of participation in some group activities and minimize the costs of participation in other group activities.

Today, the broad adoption of communication tools like cell phones and SNSs may be changing

patterns of communication and social interaction as people spend more time on mediated social interaction and managing their relationships online than ever before [8]. While these new communication channels can supplement face-to-face (FtF) interaction with peer groups [9], today's college students are faced with many choices regarding how to integrate technology into their existing strategies for social involvement and relationship maintenance.

This study is designed to explore the relationships between a range of social activities available to contemporary university students and their technology use, perceptions about social support, and performance. Our goal is to evaluate the impact traditional and novel social outlets available to students have on their behavior and academic achievement. The following section reviews literature addressing the intersection between social involvement, psychological wellbeing and achievement, and the impact Internet-based communication tools are having on young people's social lives.

## 2. Literature Review

### 2.1. Involvement and Support

Student involvement refers to the quantity and quality of physical and psychological energy that students invest in their education-related experiences [1]. Highly involved students spend their time studying, participating in school clubs, or spending time with their friends. While the amount of intellectual effort invested in schoolwork has a positive relationship with academic performance [10], social involvement is associated with better integration into academic institutions. For example, Husband [11] found that people who voluntarily dropped out of college had fewer meaningful relationships on campus and reported lower social satisfaction, opposed to those who continued their studies. Thus, one of the most significant consequences of social involvement is the development and enhancement of personal support networks.

Access to social support mediates the relationship between social involvement and student outcomes. Social support refers to emotional and material resources that are available from others via social networks and has been employed in a myriad of studies in areas including health and academic achievement. Thompson [7] suggested that participation in various groups helps students diversify their networks by getting to know people

with different backgrounds and expertise. Tinto [12] found that students who established bonds with others exhibited stronger academic persistence, consistent with Husband [11]. This behavior in turn had a positive effect on retention rates. Time and energy invested in social activity can translate into investments in social support networks that can ultimately function to enhance student's psychological wellbeing and academic performance.

Although the resources students invest academically and socially are often correlated with positive outcomes like personal development, there is a point at which socializing with friends can have detrimental effects. Terenzini, Springer, Pascarella, and Nora [13] found that those students who spent the most time socializing with friends experienced less intellectual development. Kuh [14] suggested that the relationship between involvement in out-of-class activities and personal growth may be curvilinear. Moderate involvement may benefit students the most, while too much time or energy devoted on extracurricular activities is associated with lower academic performance. The evidence above suggests that there is a point of diminishing returns regarding the balance between involvement and academic performance.

This literature review shows that high social involvement may not necessarily lead to improved access to social support resources. Due to the economics of time management, balancing time spent on social activities and academic work may be one of the most important skills college students must learn. This balance may be more challenging to find today as young people are faced with a growing range of venues for social exchange.

### 2.2. Social Exchange On- and Offline

Research on the social impacts of computer-mediated communication suggests that mediated communication does not isolate people from family and friends. Rather, these tools tend to reinforce social connectivity. The benefits of increasingly large and diverse online social networks have been documented in a large body of research [e.g. 15, 16]. The affordances of communication technology also enable users to reach people from anywhere at any time, which could enhance perceptions of social support. For example, Leung [17] found that the more time people spent using Internet-based communication tools, the less lonely, less tense, and more relaxed they felt.

Additionally, the broad adoption of the Internet and mobile phones has produced a novel social context in contemporary campus life. For example,

young people have used mobile phones as a means to participate in groups and define the boundaries of their social networks for some time now [18]. Among college students, SNSs have emerged as one of the most popular social tools in use today [19]. Sites like Facebook.com have become one of the most popular mediated forums for self-expression and mediated communication in North America. Facebook's own statistics show that each month people upload in excess of three billion photos and push more than five billion pieces of other content through their online networks. College student participation with SNSs is approaching 100% [19], and research suggests that there are benefits associated with membership in these groups. For example, Ellison, Steinfield, and Lampe [20] found that Facebook use not only helps college students stay in touch with their old friends but also facilitate creation and maintenance of new relationships. This connectivity should result in the perception of enhanced access to social support resources.

Recall that students' time and energy resources are limited and investing too much energy in maintaining relationships reduces the resources available to dedicate to academic work. Compared with offline activities requiring synchronous communication, online interactions may afford greater flexibility due to their asynchronous nature. Students may have more control over the extent to which they would like to participate in online activities than offline ones. Because people can attend to messages and engage in communication at their convenience, these tools like Facebook use should be less likely to be associated with decreased performance. As such, we do not expect the same curvilinear relationship between time spent on offline social activities and performance. Thus,

H1: The relationship between *offline* social involvement and student outcomes is curvilinear.

H2: The relationship between *online* social involvement (Facebook use) and student outcomes is positive and linear.

However, offline social interaction may be generally preferable to online interactions in terms of the actual provision of supportive resources and subsequently to overall satisfaction. While social information processing theory [21] suggests that people can effectively maintain and sustain close relationships online, to our knowledge there is no evidence that the range of relationships mediated by SNSs provide tangible resources to users.

Considering that SNSs extend the range of social networks by allowing people to maintain larger, heterogeneous networks of specialized relationships and there is little to no cost associated with amassing large online networks. As a result, the vast majority of people's online social networks are characterized as weak ties. While Granovetter [22] valued weak ties like these for information diffusion or job seeking behavior and Lin [23] suggested weak ties provide access to improved resources, little is known about the nature of these online relationships and the actual provision of supportive resources. Given that the majority of SNS friends are characterized as increasingly weak ties—relationships that people have actually invested very little in—the likelihood of mobilizing these contacts for real, concrete support is questionable. Thus,

H3: Offline social involvement has a relatively higher contribution to students' satisfaction opposed to online involvement.

In addition, not all social activities are associated with positive outcomes. Terenzini et al. [5] listed several conditions that may curb intellectual growth including membership in fraternities, sororities and athletic teams, full time employment, and having little out-of-class intellectual or academic interactions. Although the degree of involvement and the type of activities have been identified as two influential variables in terms of student performance and satisfaction, extant research needs to be revisited due to the increasingly prominent role communication technology plays in mediating interpersonal relationships. For example, playing video games may provide a source of socialization, relaxation, and coping for college-aged males [24]. Therefore, a comprehensive evaluation of how current students invest their time is needed and we propose the following research question:

RQ1: What are the relative contributions of specific social activities to student outcomes?

## 2.3. Gender Differences

Gender refers to the way that society constructs discourses and behaviors around biological sex differences [25] and gender-specific behaviors are the product of roles assigned to people based upon biological sex [26]. Social theorists have noted that women may be more relationship-oriented than men [27] and that females may make better use of social support and tend to report higher satisfaction with

their support than do males [28]. Gender effects on patterns of social involvement and outcomes are often reported in studies on college experience [29]. For example, playing video games with friends occupies a large amount of time among college men [24]. However, in terms of personal development Hayek and Kuh [30] suggested that male students may benefit most from interactions with diverse sets of peers whereas involvement in athletic and recreational activities may be important for female students.

There are also documented gender differences in communication technology use. Weiser [31] discovered that female Internet users tend to seek health and education information online, whereas males may prefer searching news and for entertainment purpose. In terms of social uses of technology, Boneva and Kraut [32] suggested that women are more likely to use online tools to maintain or extend their social networks than their male counterparts. These differences result in part from different attitudes toward relationships. Tannen [33] suggested that females have communication goals that include fostering community and avoiding isolation, while males are more likely to pursue social positioning through communication. For example, Ramirez and Broneck [9] found that females were more likely to use instant messaging for maintaining relationships than males. Considering these gender differences, we propose the following additional research question:

RQ2: How do patterns of social involvement differ based on gender?

### 3. Methods

Participants in this study were recruited from an introductory communication course at large Northeastern University during the Spring 2009 semester and all methods and materials were approved by the institutional review board. A total of 125 undergraduate students (54% female) were compensated with research credit for voluntarily completing an online survey. Participants' demographic information including age, year in school, and time spent on a range of activities were collected. Mean age of participants was 20.05 years ( $SD = 1.91$ ). Most participants were in their second or third year in school ( $M = 2.68$ ,  $SD = 0.91$ ) and the majority lived with other students (64.8%). They spent an average of 14.3 hours ( $SD = 10.99$ ) per week on academic work.

### 3.1. Measures

The instruments included three broad types of measures. In addition to demographic variables, this study included an assessment of social activity in college life which measured time spent on a range of behavior on- and offline. We also included measures of perceived social support, general life satisfaction, and self-report cumulative grade point average (GPA) which served as our dependent variables. Each is described in detail below.

*Social Activities in College.* In this study, the measures for social activity were adapted from Cutrona's study on social engagement and perceived loneliness [34]. However, in order to develop a more comprehensive list of social activities two focus groups were conducted with current undergraduate students (total  $N = 16$ ) before conducting the survey research. Focus group discussions were recommended by Krueger [35] for exploratory analysis of new research questions, which not only allow us to examine the potential survey items but also improve our understanding of the behaviors in question. Cutrona's [34] measures were used as a guide for facilitating these discussions.

A list of 8 common unmediated social activities was generated (e.g., eating meals with friends; see Table 1). Time spent weekly on each of these activities was measured with two questions addressing the amount of time per day and number of days per week spent on each activity. Not surprisingly, the use of cell phones and the Internet were the most popular mediated communication channels among participants. Phone activity included talking and text messaging while Internet activity included all social interactions via the Internet including e-mail, instant messaging, and communication via Facebook.

*Social Support.* To measure social support, the Interpersonal Support Evaluation List (ISEL) [36] was used because research suggests that perceived support may have a relatively higher influence than actual received support in terms of personal wellbeing [37]. Therefore perceived social support was used to measure perceptions regarding support resources embedded in social networks. A slightly modified version of ISEL consisted of 36 items describing specific forms of social support (e.g., "I know someone who would loan me \$50 so I could go away for the weekend."). The degree of perceived support was calculated by summing the number of positive item responses. The mean score for perceived support was 86.13 ( $SD = 62.04$ ; Cronbach's  $\alpha = .91$ ).

**Table 1. Summary data for social activities.**

Social Activities	Hours/Week M (SD)
Eat meals with friends	5.63 (5.12)
Talk with classmates/faculty members	5.10 (7.69)
Talk with roommates/neighbors	8.64 (12.46)
Go shopping, go to bar/cafe, go to see movies, etc.	12.06 (8.57)
Watch TV, DVD, and other indoor activities	7.54 (7.03)
Play video games with friends	2.51 (4.12)
Play sports or go to gym with friends (unorganized/ pickup)	2.86 (3.99)
Participate in school clubs/organizations	1.60 (3.34)
<b>Offline Total</b>	45.95 (27.86)
Chat with friends/family on the phone	7.69 (7.39)
Number of mobile phone messages exchanged with friends and family	208.5 (590.7)
Facebook Use	6.59 (8.23)
All other online social activity	6.39 (7.63)
<b>Total</b>	63.41 (36.61)

*Student Outcomes.* To measure student outcomes, academic performance and psychological wellbeing were used, consistent with extant research [see e.g., 20]. We applied the Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS) [38] to measure overall satisfaction as an evaluation of psychological wellbeing. The BMSLSS is a well-validated 5-item satisfaction assessment measuring a range of dimensions including family and friends, school experience, living environment, and self. Respondents were asked to judge their satisfaction level of each item on a 7-point Likert scale (1 = terrible, 7 = delighted). The mean score of respondents' satisfaction was 5.17 ( $SD = .97$ ; Cronbach's  $\alpha = .88$ ). Finally, academic performance was assessed based on self-report measures of participant's GPA ( $M = 3.22$ ,  $SD = .42$ ).

#### 4. Results

Participants spent an average of 45.95 hours ( $SD = 27.86$ ) per week interacting FtF and 20.67 hours ( $SD = 16.31$ ) per week on mediated interaction. Among the mediated social activities, participants spent an average of 4.47 hours ( $SD = 4.83$ ) on the phone and an average of 12.99 hours ( $SD = 12.49$ ) interacting online weekly. Participants also spent an average of 6.59 hours ( $SD = 8.23$ ) per week on Facebook and they had an average of 378.89 ( $SD = 258.95$ ) Facebook friends (see Table 1, below).

Aggregate time spent with friends (offline, online, and phone) and perceived social support were both skewed right and these items were log transformed to normalize the distribution for analysis. Zero-order correlations between the categories of social involvement, perceived social support, satisfaction,

**Table 2. Zero-order correlations between online/offline social involvement, support, satisfaction, and GPA (means and standard deviations in parentheses along diagonal).**

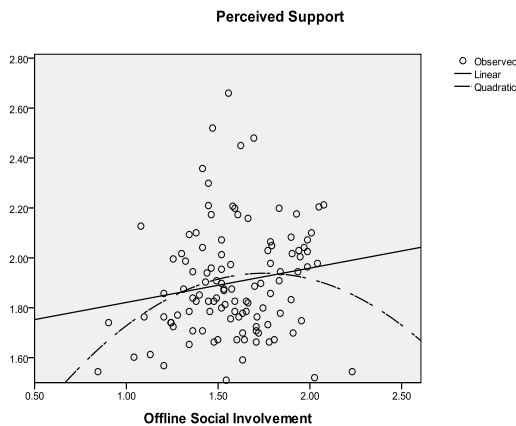
	1 (M, SD)	2	3	4	5	6	7	8
1.Support	(1.86, .24)	.182*	-.087	.098	.071	.196*	-.078	.118
2.Satisfaction		(5.17, .97)	.090	.226*	.006	.103	.178*	.178*
3.GPA			(3.22, .42)	-.101	-.101	-.064	.043	-.085
4.Offline				(1.58, .27)	.291**	.280**	.258**	.871**
5.Online					(.95, .41)	.776**	.228**	.605**
6.Facebook						(.60, .38)	.257**	.495**
7.Phone							(.70, .42)	.576**
8.Total								(1.76, .23)

Note: \*  $p < .05$ , \*\*  $p < .01$

and GPA were calculated and summarized in Table 2.

A series of ordinary least squares (OLS) regression models with curve estimation were calculated to test hypothesis 1 which stated that moderate levels of offline involvement and hypothesis 2 which stated that high levels of online involvement are associated with positive outcomes. In terms of perceived support, the analysis resulted in significant findings. Offline social involvement was curvilinearly correlated with perceived support (see Figure 1, below). Facebook use was linearly correlated with perceived support. Results showed that perceived social support was positively related to satisfaction and time spent interacting offline. However, these results suggest that the relationships between both online and offline involvement and satisfaction were linear. The analyses resulted in non-significant findings in terms of self-reported GPA.

**Figure 1. The Relationship between Perceived Support and Offline Social Involvement.**



**Table 3. Standardized betas for models explaining perceived support**

	<u>Model 1</u> $\beta$ (Std. Error)
Offline interaction	.183 (.074)
Facebook use	.250* (.019)
Phone conversation	-.190 (.047)
Facebook friends	-.078 (.000)
Online groups	.214* (.009)
Offline groups	-.001 (.017)
Adj. R <sup>2</sup>	.091**

Note: \*  $p < .05$ , \*\*  $p < .01$ ; Model 1,  $F(6, 118) = 3.08^{**}$ .

OLS regression models were used to examine the relative impacts of Facebook use and offline

involvement on perceived support. The results in Table 3 above show that all variables in model 1 accounted for about 9.1% of the variance in explaining perceived support. Facebook use ( $\beta = .250$ ) and online group participation ( $\beta = .214$ ) were both significant predictors of perceived support. Consistent with prior research, students who spent more time on Facebook believed they had greater access to support resources.

To test hypothesis 3, the relative contributions of FtF and mediated activities to satisfaction were examined. Once again, OLS regression models were used. Results in Table 4 below show that all variables in model 2 accounted for about 9.4% of the variance in explaining satisfaction. Offline social involvement ( $\beta = .194$ ) was a significant predictor, suggesting that spent on offline activities was associated with greater satisfaction. However, time spent on online activities *other* than Facebook ( $\beta = -.280$ ) had negative relationship with satisfaction. These results offer strong support for hypothesis 3.

**Table 4. Standardized betas for models explaining satisfaction.**

	<u>Model 2</u> $\beta$ (Std. Error)
Offline interaction	.194* (.336)
Facebook use	.137 (.029)
Other online interaction	-.280** (.076)
Phone conversation	.156 (.220)
Adj. R <sup>2</sup>	.094**

Note: \*  $p < .05$ , \*\*  $p < .01$ ; Model 1,  $F(4, 120) = 4.21^{**}$ .

To address research question 1 about the relationship between the range of activities and outcomes addressed in this study, correlations between time spent on specific activities, perceived support, satisfaction, and GPA were calculated. Results suggested that satisfaction was positively correlated with time spent on “talking with classmates/ faculty members”, “watching TV, DVD and other indoor activities”, and “phone chatting”, while GPA was negatively correlated with “phone text messaging.” Also, t-tests were calculated to examine the effects of club/organization participation (e.g., school sport team, fraternity/sorority, and campus/off-campus clubs) and suggested that participation in fraternities/sororities was associated with decreased student satisfaction ( $M = 4.95$ ,  $SD = 1.21$  vs.  $M = 5.22$ ,  $SD = .92$ ,  $t(123) = 6.11$ ,  $p < .05$ ).

To address research question 2 about possible gender-based differences regarding patterns of social involvement, a series of ANOVAs were calculated with gender as the between group variable. In terms of FtF interaction, male students tended to spend

more time playing video games with friends ( $F(1,123) = 15.39, p < .01$ ) and playing organized sports or going to the gym with friends ( $F(1,123) = 6.75, p < .05$ ). In addition, results showed that female students tended to spend more time on Facebook ( $F(1,123) = 8.03, p < .01$ ) and other online social activities ( $F(1,123) = 7.29, p < .01$ ). Although no gender differences were apparent in phone use, female students tended to spend more time communicating. However, no gender differences were found in terms of perceived support, satisfaction, or performance. While these results are not surprising, they do confirm some enduring differences in gender-specific behavior.

## 5. Discussion

Considering the growing predominance of mediated communication and the near-ubiquitous use of SNSs like Facebook.com, the time has come to reevaluate our understanding of the relationships between student participation in a range of on- and offline social activities, perceived social support, satisfaction, and academic performance. The goal of this research was to examine the relative contributions of different types of social activities and different modalities of interaction on perceived support and outcomes. Although not every hypothesized relationship was supported by the analyses, these results do help to render an account of the social lives and communication practices of today's university students.

Recall that hypothesis 1 proposed that moderate offline social involvement would be ideal for students and that there is a point of diminishing returns when investing resources in this domain. By supporting this hypothesis, the current study has extended previous findings by considering the interactions between offline and online social involvement. Mediated communication may enable students to interact with their social ties at their convenience. The results suggest that the curvilinear relationship was not evident for online interaction, but it did manifest in the relationship between offline communication and perceived support. However, our regression models show that people who spent more time engaging with others FtF were generally more satisfied with their lives. It seems that directed, personal and synchronous conversations may be more beneficial than computer-mediated interaction in this regard.

Regarding the relative contributions of FtF and mediated activity to perceived support and outcomes, our findings suggest that Facebook use had a positive

relationship with perceived support. On the other hand, FtF interaction with family, friends and colleagues had a positive relationship with satisfaction. Here, SNSs like Facebook functionally reduce the communication costs associated with maintaining expansive social networks and because networks are articulated and made visually accessible, the scope of people's networks may become more salient. The net effect of these technological affordances may be to enhance the *belief* that partners have greater access to each other and concomitant resources. However, questions about the actual functional utility of such expansive online networks remain. For example, recent research suggests that some people engage in "promiscuous friending" online whereby up to 15% of Facebook networks are comprised of people never actually met FtF [39].

Regardless, the regression models suggest that Facebook use and online group membership enhanced perceived support. It seems that some benefits do accrue to Facebook users consistent with Ellison et al. [20]. Interestingly, the size of people's Facebook networks did not have a relationship with perceptions of access to social support. Online network size alone represents a limited dimension of social networks that may not correlate with access to actual resources. Recall that large proportions of Facebook networks consist of relative strangers [39]. This kind of friending behavior calls into question the nature of resources available via online social networks. Increasingly nuanced measures of network composition like the proportion of strong, weak and meaningless connections might be more accurate predictors of perceived support, and one area for future research would be to determine how much capital actually accrues to SNS users as a function of their online networks.

In terms of academic performance, our regression analyses resulted in non-significant findings. One possible explanation is that the credibility of self-report GPA is questionable. In addition to a possible inflation bias, there simply was not much variance in the distribution of participants' reported GPA ( $M = 3.22, SD = .42$ ). However, the results from correlation analyses show that the number of text messages exchanged through mobile phones was negatively correlated with GPA. Although texting is viewed as an asynchronous and more manageable communication channel compared to FtF interaction, the always-on and always accessible nature of mobile devices like cell phones may distract students from academic work.

Interestingly, our data show that participation in popular and highly visible social groups like

fraternities and sororities was negatively related to general satisfaction. These groups are commonly characterized by ritualistic initiation practices designed to promote highly cohesive and exclusive groups characterized by shared identities. In other words, members of these groups are likely to share strong tie connections with each other, increasing access to social support resources and making people happier. However, the costs associated with these groups seem to outweigh the potential benefits of gaining access to wider support networks, consistent with Terenzini et al. [5]. Considering that these groups are often characterized by indifference to education and a culture of substance abuse [6], it may not be surprising that members often experience weaker academic performance [40].

Results also revealed gender differences regarding time invested in a range of different activities. Male students spent more time on sports related activities and playing video games. In terms of social technology use, females spent more time online maintaining relationships, consistent with Boneva and Kraut [32]. It seems that these gender-based differences in behavior are persistent.

Limitations to this study include the possibility of estimation errors for time spent on social activity. For example, time spent on conversation with friends is difficult to calculate independently from other specific activities. Also, some of the measures used in this exploratory study were coarse. For example, time spent logged into Facebook is an aggregate measure of Facebook use, but indices reflecting the intensity of communication through SNSs might better reflect the extent to which people use these sites to maintain relationships. Future research could employ diary-interview methods [41] to gather more detailed and qualitative information about today's students' social life and then determine why some activities may play more important roles in terms of perceived support and outcomes. This study also relied on self-report measures of student performance. While this is not ideal, it was the best available measure.

Future research should explore the possibility that SNSs like Facebook function as memory systems or aides which make the scope of networks salient to users. Immediate access to digital representations of expansive networks may in turn exaggerate the perception that users are well connected which leading to the belief they have access to higher levels of social support resources. While the perception of social support may manifest on social scientific survey research (as evident in the current study) as positive evaluations of support and satisfaction, questions

remain regarding the actual instrumental value of these mediated connections.

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