

# Can Facebook Use Induce Well-Being?

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## Abstract

Over the past few decades, the widespread phenomenon of Internet abuse has gained attention from the public, academia, and the media. In a departure from this negative viewpoint, however, researchers and educators have devoted considerable effort in attempting to understand the influence of online communication on people's psychological well-being. This study focuses specifically on Facebook, and proposes a research model to examine the relationships among Facebook use, online social support, general social support, and psychological well-being.

Our results show that using Facebook helped college students to obtain online social support, and that online social support is an extension of general social support. However, although general social support contributes to well-being, online social support appears to have little direct effect on well-being. The relationship between online social support and well-being is mediated through the factor of general social support.

## Introduction

**P**OSITIVE PSYCHOLOGY IS A BRANCH of psychology that has developed in recent decades and is an umbrella category encompassing various topics. Under this umbrella, one vital line of research has examined the relationship among well-being, interpersonal relations, and social support.<sup>1,2</sup> Argyle<sup>3</sup> showed that human relationships and friendships constitute a major factor in personal well-being. Ko and Kuo<sup>1</sup> also showed that online friendships provide numerous benefits, such as enhancing a person's quality of life and well-being and improving interpersonal relationships. In this line of research, Berkman et al. and Peterson indicated that social support is provided in a mutually caring relationship and social support robust correlated of well-being.<sup>4,5</sup>

In recent years, Facebook has been one of the most visited online social networking sites, with 7 million visitors a month. Among its 500 million active users, people of college age constitute the largest age group. Facebook provides an easy way for users to build their social networks, make new friends, and keep up with old friends. Thus, Facebook has become a popular medium for interpersonal communication, particularly among college students.<sup>6,7</sup> In addition, Facebook provides access to several online games, all of which are designed to accommodate the user's friendship network. Facebook users regularly invite their friends to join a game and play collectively. These interactive features allow the user to connect with more friends, and users can send virtual gifts to their friends or perform a virtual favor for them at no

monetary cost. Consequently, people can extend their social networks and gain increased online social support.

Online interpersonal relationships can provide many benefits, such as fulfilling social needs or exchanging online social support, thereby increasing the user's well-being.<sup>8</sup> However, few studies thus far have examined the relationship between Facebook use and the user's well-being. The use of Facebook as a resource for exchanging social support between college students has also not been adequately investigated. Therefore, this study proposes a research model to analyze the relationships among Facebook usage, online social support, general social support, and well-being.

## Research Model and Hypotheses

Harry Stack Sullivan (1892–1949) was a psychologist who primarily emphasized interpersonal relationships. In his interpersonal theory, he proposed that people are never isolated from the complex interpersonal relations in which they live and have their own being. Sullivan indicated that social anxiety results from a frustrated need for personal companionship after preadolescence.<sup>9</sup> Social anxiety can profoundly affect people by interfering with the diverse aspects of their functioning such as cognition, communication, learning, and emotional intimacy. In this framework, interpersonal relationships play a vital role in maintaining a person's physical, mental, and social health.<sup>9</sup>

In a departure from traditional research on relationships, a growing number of researchers have investigated the

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consequences of online communication (such as instant messaging and social networking sites). These studies have shown that people may develop new lifestyles as a result of Internet activities. Social networks expanded by the Internet may provide college students with greater social support, which in turn may be associated with relevant health outcomes such as reduced stress.<sup>10</sup> Shaw<sup>11</sup> showed that Internet use could significantly reduce feelings of loneliness and depression, and significantly increase perceived social support. Coulson<sup>12</sup> showed that people with chronic illnesses can gain online social support through information sharing between supportive group members. Lin and Anol<sup>13</sup> reported that using IT helped people gain online social support.

In recent years, Facebook has become integrated into many college students' everyday lives, and is often a key medium for maintaining their interpersonal relationships.<sup>14,15</sup> Facebook provides students with opportunities to meet other students with similar interests, which may lead to an extension of a person's social network. In many cases, these online relationships develop into real-world relationships; in other cases, the main benefit is online social support.<sup>11</sup> Therefore, we propose the following hypothesis:

**H1: A positive relationship exists between using Facebook and online social support.**

Social support can be defined as the feeling of being cared for by others and receiving assistance from them, as well as being part of a supportive social network.<sup>16</sup> Social support plays a vital role in maintaining people's mental and physical health. During stressful times, social support helps people reduce psychological distress and its symptoms such as anxiety or depression.<sup>17</sup> Supportive social resources can be emotional (e.g., nurturance), tangible (e.g., financial assistance), informational (e.g., advice), or of a companionship (e.g., a sense of belonging). Social support can come from many sources, including family, friends, pets, organizations, and coworkers.<sup>18</sup> The Internet has become an essential medium for interpersonal communication and facilitates obtaining online social support. Bambina<sup>19</sup> indicated that informational and emotional support can be transmitted through an online social network. Coulson<sup>12</sup> found that a supportive group can provide informational support to group members, notably in the areas of symptom interpretation, illness management, and interaction with healthcare professionals. Helgeson and Cohen<sup>20</sup> further showed that emotional support was found to be the most helpful type of support. The absence of emotional support was more harmful than that of other types of support.

Facebook is one of the most popular social networking sites among college students today. Facebook facilitates connections between people, and can also provide online social support through information sharing and friendship with other Facebook members. College students can share information about real-life events, and people can express warmth or care through messages. These types of interactions and topics discussed on Facebook may provide greater opportunities for students to communicate with others in real life. Such reciprocity can lead to deeper relationships over time. Shaw et al.<sup>11</sup> reported that online relationships frequently develop into real-world relationships and social support. Trepte et al.<sup>21</sup> showed that people can gain online social support through online gaming, and that online social sup-

port is positively related to social support in general. We thus propose a second hypothesis, as follows:

**H2: A positive relationship exists between online social support and general social support.**

The concept of psychological well-being derives from developmental psychology, particularly from lifespan developmental psychology.<sup>22</sup> "Well-being" offers diverse depictions of wellness, conceived as continuous personal growth throughout the course of life. Self-actualization is a central theme in the definition of well-being.<sup>22</sup> Psychological well-being encompasses six dimensions of wellness: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance.<sup>23</sup> The number of studies on well-being has increased in recent decades, and the association between social support and well-being has been extensively researched.<sup>24</sup> Dean and Lin<sup>17</sup> showed that social support may act as an effective buffer or mediator of life stress; they also reported that social support may affect psychological well-being. Cohen and Wills<sup>25</sup> proposed that social support influences well-being because such support enhances positive emotions, a sense of self-worth, and predictability in life. Social support also functions as a stress buffer by reinforcing a person's self-esteem, self-efficacy, and problem-solving behaviors.<sup>25</sup>

In the modern sociotechnical environment, the Internet has become an integral part of many people's daily social lives. Online communication (such as e-mailing, instant messaging, and social networking sites) has surged in popularity as a means for people to maintain contact. Smedema and McKenzie<sup>26</sup> found that online chatting had a positive association with online social support and well-being. Previous studies have suggested that social support can be found online.<sup>27,28</sup> We thus propose our third and fourth hypotheses, as follows:

**H3: A positive relationship exists between general social support and well-being.**

**H4: A positive relationship exists between online social support and well-being.**

To summarize the findings of previous studies, we designed a framework to integrate the constructs of "Facebook usage," "online social support," "general social support," and "well-being." Our model facilitated the analysis of the relationships among Facebook usage, online social support, general social support, and well-being. Figure 1 shows the research model and hypotheses.

## Methods

### Participants

We restricted the population to improve our model and hone our focus. We chose Taiwanese college students who

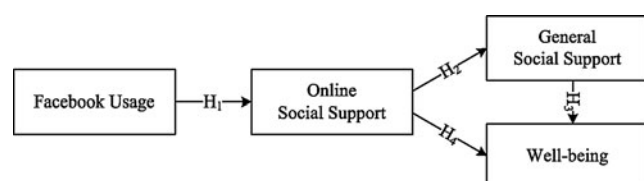


FIG. 1. Research model and hypotheses.

use Facebook as our participants. Data for this study were collected from a convenience sample consisting of 400 college students in Taiwan; 355 students completed the questionnaire. Of these, 25 students were rejected because of missing data, resulting in a final sample of 330 respondents. The participants ranged in age from 18 to 23 years. Men comprised 37% of the sample. To examine gender differences in our research variables, we performed an analysis of variance (ANOVA) by using Facebook use, general social support, online social support, and well-being as dependent variables and gender as the between-group factor. The results indicate that there were no gender differences in Facebook use, general social support, online social support, and well-being.

### Measures

We measured four variables for analysis: intensity of Facebook use, level of general social support, level of online social support, and well-being. The scale that we used to measure the intensity of Facebook use was developed by Ellison et al.<sup>29</sup> This scale is based on self-reports of time spent online and the number of friends, and respondents are asked to rate their level of agreement with the following statements: "Facebook is part of my everyday activity"; "I am proud to tell people I am on Facebook"; "Facebook has become part of my daily routine"; "I feel out of touch when I haven't logged onto Facebook for a day"; "I feel I am part of the Facebook community at the campus"; and "I would be sorry if Facebook shut down."

To measure social support, we used the Interpersonal Support Evaluation List (ISEL) developed by Cohen and Syme.<sup>30</sup> The scale consists of 40 items, and participants are asked to rate how strongly they agree with each statement. The items include content such as "If I wanted to have lunch with someone, I could easily find someone to join me"; "When I feel lonely, there are several people I can talk to"; "I often meet or talk with family or friends"; and "If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me." We modified the ISEL to measure online social support in particular. Example items include "When I feel lonely, there are several people on Facebook I can talk to" and "I often meet or talk with family or friends on Facebook."

To measure well-being, we used Ryff's scales of psychological well-being.<sup>23</sup> This scale includes six components: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Each component contains three items, and participants are asked to rate how strongly they agree with each statement. Examples include "I judge myself by what I think is important, not by the values of what others think is important";

"For me, life has been a continuous process of learning, changing, and growth"; "When I look at the story of my life, I'm pleased about how things have turned out"; "Maintaining close relationships has been difficult and frustrating for me"; "Some people wander aimlessly through life, but I'm not one of them"; and "In general, I feel I'm in charge of the situation in which I live."

All items in the questionnaire are on a 5-point Likert scale with the anchors 1="strongly disagree" and 5="strongly agree." The scores of negative items are reversed. We used SPSS v13.0 to conduct exploratory factor analysis. We also used Smart PLS and performed CFA to examine the proposed measurement. An analysis of the discriminant validity showed that the factor loadings were greater than 0.7 for all items, thus providing evidence for the validity of our research constructs. In addition, the composite reliability (CR) and average variance extracted (AVE) of the formal questionnaires are reported. The CRs exceed the level of 0.7 recommended by Fornell and Larcker.<sup>31</sup> This confirms the internal consistency of the research construct items. The AVE estimates, ranging from 0.5 to 0.59, exceed the level of 0.5 recommended by Fornell and Larcker,<sup>31</sup> which supports convergent validity. Table 1 shows that the measurements meet the requirements for reliability and for convergent and discriminant validity.

### Results

SmartPLS 2.0 was used to perform partial least squares (PLS) model testing because we partially measured the constructs using formative scales. The assessment of formative scales is easily accomplished by using PLS.<sup>32</sup> As recommended by Chin,<sup>33</sup> we used a PLS bootstrapping technique. Figure 2 shows the results, which indicate that the intensity of Facebook use was a significant predictor of online social support ( $\beta=0.481$ ,  $p<0.001$ ,  $R^2=0.231$ ). Thus, H1 was supported, meaning that Facebook use can help people to access online support. College students can ask for social help through Facebook when necessary.

We also found that online social support was significantly related to general social support ( $\beta=0.424$ ,  $p<0.001$ ,  $R^2=0.180$ ). This result provided evidence to support H<sub>2</sub>, which indicates that online social support was an extension of general social support. Facebook use can reduce physical and social barriers encountered by college students by allowing them to access expanded social networks and information. Students can easily experience the benefits of online emotional and informational support by using Facebook.

Online social support ( $\beta=0.095$ ,  $p<0.05$ ) and general social support ( $\beta=0.586$ ,  $p<0.001$ ) significantly predicted well-being. Online social support and general social support

TABLE 1. CORRELATION COEFFICIENT, AVE, AND CR OF THE CONSTRUCT AGAINST SQUARE ROOT OF AVE

	Cronbach's $\alpha$	AVE	CR	Intensity of FB use	Well-being	General social support	Online social support
Intensity of FB use	0.89	0.59	0.92	<b>0.77</b>			
Well-being	0.71	0.50	0.72	0.52	<b>0.71</b>		
General social support	0.87	0.53	0.76	0.41	0.46	<b>0.73</b>	
Online social support	0.84	0.59	0.81	0.43	0.42	0.65	<b>0.77</b>

Note. AVE, average variance extracted; CR, composite reliability. Bold-line values on the diagonal indicate the square roots of AVE.

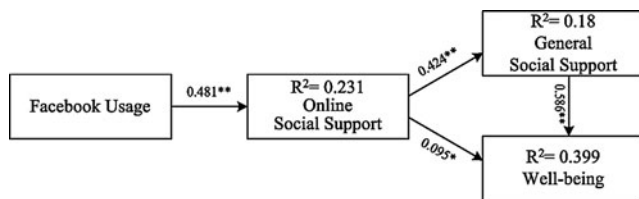


FIG. 2. Structural model test results.

collectively accounted for 39.9% of the variance in well-being. Therefore, H<sub>3</sub> and H<sub>4</sub> are supported by the evidence. Furthermore, to examine how general social support mediates the associations between online social support and well-being, mediation analyses were conducted. The indirect effect value for the mediation model was 0.248 ( $t=6.16$ ,  $p<0.001$ ), and the direct effect between online social support and well-being was 0.095 ( $t=1.738$ ,  $p<0.05$ ). The test results of mediation analyses show that the relationship between online social support and well-being is mediated through general social support. Our findings show that using Facebook can enable people to maintain online social support, and that online social support can enhance social support for college students. In addition, the relationship between online social support and well-being is mediated through general social support.

## Conclusion

Previous studies have shown that people may develop new lifestyles as a result of Internet activities and online social support. As indicated by Kang,<sup>2,10</sup> using online chatrooms cannot directly reduce a person's depression or increase a person's well-being and social support. Our findings similarly indicate that using Facebook does not directly improve a person's well-being. However, Facebook can help people obtain strong online social support, and online social support can in turn help people access real-life assistance or find supportive resources. Moreover, college students with adequate general social support can enhance their psychological well-being.

The findings of this study have several relevant implications. First, features of Facebook online games that emphasize cooperation and interaction, such as virtual gifts and virtual favors, help people learn social skills without incurring any monetary costs. Students can send gifts to their friends or express warmth toward others without incurring any costs. These behaviors allow friends to feel closer. The pursuit of goals included in the design of online games also encourages students to connect with new friends. This phenomenon helps students extend their social networks. Second, Facebook not only helps college students interact through the Internet, but also increases their mutual interactions in real life. The topics discussed on Facebook sometimes provide greater opportunities for students to communicate with others in real life. Conversely, students can use Facebook to share information about real-life events. Such reciprocity can lead to deeper relationships over time.

In practice, we suggest that educators or parents help students who are shy, introverted, and lacking in social skills initiate social interactions with others on Facebook so that they can express warmth toward others freely. Without the pressure of time and physical cues that accompany face-to-

face communication, students can organize information flow, enhance their self-image, and portray themselves freely by strategically selecting how and what to convey to receivers. Under these conditions, Facebook provides an opportunity for students to become better understood socially and learn social skills quickly. Facebook is gradually emerging as an alternative channel for expanding friendship networks and searching for a sense of belonging.

From a theoretical viewpoint, previous studies have presented conflicting claims of the relationship among Internet use, social support, and well-being.<sup>26,27,34-37</sup> We find that the researchers did not make the distinction between online social support and social support. Our results indicated that online social support contains only a subscale of support (e.g., emotional, informational, and companionship support), but general social support includes emotional, informational, companionship, and tangible support. In this study, we separated online social support from general social support to explore the relationship between Internet use and well-being. The results showed that the relationship between online social support and well-being is mediated through general social support. Facebook users are restricted to providing emotional, informational, or companionship support. Tangible supportive resources continue to exist only in real life. Our findings confirm that general social support is the critical factor influencing well-being, and that it is also a critical mediator between online social support and well-being. Students cannot become isolated from the physical world because Facebook is not a substitute for an unmet need in an actual relationship; rather, it is an extension of the actual relationship. Students experience a strong sense of well-being when they effectively integrate online social support with general social support.

## Author Disclosure Statement

No competing financial interests exist.

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