

University Students' Perceived Self-control and Prosocial Norms for Beneficial Social Media Use

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Abstract

Although many studies have been conducted on social media abuse, socio-psychological determinants of positive social media usage are still underresearched, specifically concerning self-control and prosocial norms for university students. These two important antecedents of accountable behavior have not been thoroughly studied in developing countries. Therefore, the current study investigated university students' perceptions of self-control and prosocial norms and determined whether they co-exist and are associated with intended behavior and desired beneficial usage. This study modified measurement items adopted from previous studies to fit the current context. A social media survey was conducted through Facebook Messenger among students from a public university in Bangladesh. 226 voluntary responses were recorded based on purposive sampling. The data were analyzed using SPSS and SmartPLS 4. Descriptive statistics were analyzed. Hypotheses were tested using the structural equation modeling technique, whereas the differential effects of gender and social media platforms were tested using ANOVA. The findings demonstrate that university students value self-control and prosocial norms as crucial determinants of positive social media behavior. These factors strongly correlate with intended self-control and prosocial behavior, and desired beneficial use. Additionally, gender and the type of social media platform used have no significant impact on these results. This study explored valuable insights into the role of self-control and prosocial norms in promoting beneficial social media use among university students, which may have significant implications for their personal and social well-being.

Keywords: self-control, prosocial norm, beneficial social media use, structural equation modeling

1. Introduction

Social media has revolutionized our interactions, making communication and information sharing easier worldwide. In recent years, social media usage among university students has increased significantly. Many students use social media to connect with peers, stay updated on current events, and share information. However, social media has also presented new challenges. Overuse of social media can lead to negative outcomes, such as addiction, procrastination, and decreased academic performance. It can also be linked to other harmful behaviors, such as cyberbullying, hate speech, and online harassment. Therefore, understanding the role of self-control and prosocial norms in promoting positive interactions on social media is crucial. Self-control and prosocial norms are complementary strategies for encouraging positive behavior among students on social media.

Self-control can help university students avoid impulsive and potentially harmful behaviors, while adhering to prosocial norms can promote positive social interactions that benefit both individuals and society. However, the perception of self-control and prosocial norms among university students in the context of social media in a developing country such as Bangladesh has not been explored. This study aims to address this gap, which is crucial for the country, where the average internet addiction rate is 27.1% in general, and 28.6% among university students aged between 19-24 in particular (Hassan, Alam, Wahab, & Hawlader, 2020).

In Bangladesh, young people are the most abusers of social media, contributing to many challenges for social sustainability (Haque et al., 2020). While Facebook is the most popular social media platform, it is often irresponsibly used by the country's young population (Ahmed, Sultana, Alam, Griffiths, & Hiramoni, 2022). Social media abuse in Bangladesh includes online misinformation sharing, pornography, gambling, addiction, political and religious misuse,

sexual harassment, and bullying (Ahmed et al., 2022; Haque et al., 2020; Hassan et al., 2020; Islam et al., 2021). However, the social media cyberbullying trend among university students is upscaling and developing significant challenges for harmony in society (Sheikh, Hossan, & Menih, 2023).

Researchers suggest that technology-dependent measures and administrative actions may not be sufficient to combat social attacks online due to limitations in understanding the gravity of the problem and the social power beyond online (Rebollo-Catalan & MayorBuzon, 2020). Furthermore, they are concerned about the limited connection between such initiatives and the resources and services offered, which may not effectively assist the victims or deter perpetrators from engaging in misuse. Additionally, such measures' fair and effective application in the unregulated online world is questionable. Therefore, researchers worldwide suggest promoting positive online behavior through awareness, prevention, and educational interventions instead of relying solely on traditional coercion strategies (Ferrara, Cresci, & Luceri, 2020).

The present study proposes two underresearched socio-psychological determinants of responsible behavior: self-control and prosocial norms. Exercising self-control on social media may help university students avoid hurtful or offensive comments, cyberbullying, or spreading false information, leading to a more harmonious online community. Adhering to prosocial norms means promoting positive social behaviors such as kindness, empathy, and cooperation on social media. Therefore, the current study aims to achieve the following research objectives:

1. To explore university students' perception of self-control and prosocial norms and whether they co-exist.
2. To explore whether university students' perception of self-control and prosocial norms are associated with intended self-control and prosocial behavior and desired beneficial use of social media.

2. Literature Review and Hypotheses

2.1 Self-control and University Students' Social Media Use

According to the self-control theory (Gottfredson & Hirschi, 1990), self-control is a psychological perspective focusing on individuals' ability to control their impulses and behaviors. The theory is rooted in the broader field of self-regulation, which refers to the procedure by which individuals monitor and control their thoughts, feelings, and behaviors (Baumeister & Vohs, 2003). Individuals with high levels of self-control are better able to resist temptation and delay gratification, leading to more successful outcomes in various domains of life, including academic achievement, interpersonal relationships, and overall well-being. Research has shown that individuals with higher levels of self-control are more likely to succeed academically (Duckworth & Seligman, 2005), exhibit better health behaviors, and have more satisfying interpersonal relationships.

Social media use can be addictive among university students, leading to negative emotional and psychological effects, including decreased academic performance, decreased social skills, and increased anxiety and depression (Andreassen, Pallesen, & Griffiths, 2017; Pantic, 2014). Procrastination is another consequence of social media use, as frequent users are more likely to procrastinate and have poorer time management skills (Rosen, Carrier, & Cheever, 2013). Additionally, social media use can foster cyberbullying, as individuals lacking self-control may be likelier to engage in such behavior (Patchin & Hinduja, 2010).

Individuals who lack self-control may be likelier to share negative or inappropriate information, which can lead to reputational damage (Baumeister, Stillwell, & Heatherton, 1994). Given the negative consequences of social media use, self-control is an important skill for university students. By exercising self-control, students may avoid addiction, procrastination, negative emotional and psychological effects, cyberbullying, and reputational damage. Moreover, students who exercise self-control are more likely to use social media positively and productively, which can enhance social connections and overall well-being (Verduyn et al., 2015).

2.2 Prosocial Norms and University Students' Social Media Use

Prosocial norms are social expectations that encourage individuals to act to benefit others and the common good rather than just themselves (Siu, Shek, & Law, 2012). They can be learned through modeling and observation, and individuals who internalize these norms are more likely to engage in altruistic behaviors, such as volunteering and sharing (Jung, Seo, Han, Henderson, & Patall, 2020). Prosocial norms can be reinforced in various settings, such as schools and online communities, and can generalize across different contexts, influencing behavior beyond specific situations (Erreygers, Vandebosch, Vranjes, Baillien, & De Witte, 2018; Nook, Ong, Morelli, Mitchell, & Zaki, 2016). Also, prosocial conformity, which refers to the phenomenon where individuals exhibit similar behavior to those who engage in prosocial behavior in each context, highlights the powerful role of social norms in shaping behavior (Nook et al., 2016).

Similarly, adherence to prosocial norms can promote positive social interactions on social media by encouraging behaviors including kindness, empathy, and respect for others (Wright & Li, 2011). When students observe others

engaging in prosocial behaviors on social media, they may be more likely to adopt them, creating a virtuous cycle of positive social interaction.

2.3 University Students' Desired Beneficial Use of Social Media

Although responsible use of social media is a significant challenge (Kunst, Porten-Che , Emmer, & Eilders, 2021) based on the purpose and impact of interactions (Cohen-Almagor, 2020), social media offers many beneficial usages for university students. Social media platforms, including Facebook, can be valuable tools for facilitating group work and knowledge sharing among students (Manca & Ranieri (2016). In addition, social media can provide access to a wide range of academic resources and allow students to connect with experts and researchers in their field (Samuels-Peretz, Dvorkin Camiel, Teeley, & Banerjee, 2017). However, using social media for academic purposes can raise concerns about the privacy and reliability of information.

Social media positively impacts creativity, particularly in idea generation, inspiration, and collaboration (Al Hashimi, Al Muwali, Zaki, & Mahdi, 2019). It provides students with diverse perspectives and resources, and opportunities to connect and collaborate with others, leading to increased creativity and innovation. Social media also positively affects well-being by providing opportunities for social support and a sense of community (Ellison, Steinfield, & Lampe, 2011). Similarly, Best, Manktelow, and Taylor (2014), discovered that social media could connect individuals with similar interests and experiences, promoting social support and well-being. Nonetheless, the quality of social connections on social media can vary, and problematic social interactions can negatively affect well-being.

Facebook can enable cross-cultural communication and collaboration, allowing students to learn and share cultural experiences (Russo, 2011). Social media also offers virtual cultural exchange programs and language learning, connecting students to cultural events. However, students should understand the responsible cultural exchange, considering potential cultural biases and stereotypes.

Facebook, Twitter, and Instagram allow students to share news, updates, and environmental resources and connect with like-minded individuals and organizations. This fosters a deeper understanding of environmental issues and promotes collaborative learning and problem-solving (Rezaei, Ahmadi, & Karimi, 2022). Additionally, social media can raise awareness about environmental issues, promote sustainability, and encourage activism, creating a platform for students to share their ideas and initiatives (Hamid, Ijab, Sulaiman, Anwar, & Norman 2017). Social media can help students access information and networking opportunities for career success, informed decision-making, and develop personal brands to attract potential employers (Donelan, 2016; Hood, Robles, & Hopkins, 2014).

Discussions and collaborations can lead to new ideas for promoting economic sustainability and opportunities (Dasgupta & Pawar, 2021). Social media also supports students seeking financial assistance and jobs and assist in career development through networking and promoting their potential and skills (Barnes, 2019; Wood, Lehdonvirta, & Graham, 2018). A student entrepreneur may successfully market a small business and connect with customers through social media platforms like Facebook and Instagram (Nawi, Al Mamun, Nasir, Raston, & Fazal, 2017). However, students must use social media responsibly and critically evaluate information to ensure its accuracy and relevance. Social media enables students to access religious resources, share insights, and connect with a community of like-minded individuals, promoting mutual respect and tolerance. Nevertheless, ensuring that the information shared is accurate and respectful is crucial and fosters positive social interactions (Rautela & Sharma, 2019).

The literature review suggests that students can benefit greatly from using social media for education, learning, and knowledge sharing related to various positive social, economic, environmental, cultural, and religious issues. However, university students must exercise self-control and adhere to prosocial norms while using social media to maximize its benefits. Lin and Utz (2015) found a positive association between self-control and positive experiences on social media, indicating that students can use social media effectively by avoiding inappropriate content and engaging in positive interactions. Additionally, promoting prosocial norms can encourage students to engage in constructive and helpful online behaviors while avoiding harmful behaviors (Baccarella, Wagner, Kietzmann, & McCarthy, 2018; Erreygers et al., 2018). So, based on these theoretical backgrounds and previous studies, the present study has drawn the following research hypotheses:

H1: Perception of self-control and prosocial norms can significantly correlate among university students.

H2a: University students' perception of self-control is associated with their intended self-control behavior.

H2b: University students' perception of prosocial norms is associated with their intended prosocial behavior.

H3a: University students' perception of self-control is associated with desired beneficial use of social media

H3b: University students' perception of prosocial norms is associated with desired beneficial use of social media.

The conceptual model is presented in Figure 1 based on these hypotheses:

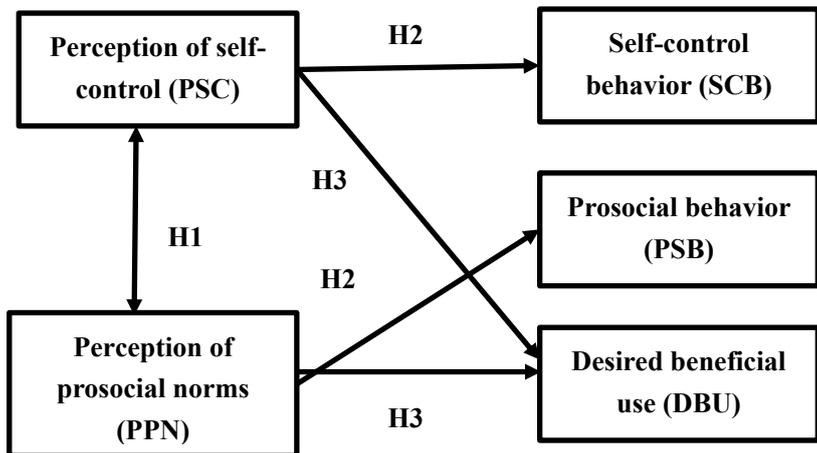


Figure 1. Study's conceptual model

3. Methods

3.1 Procedures and Participants

This study is part of a graduate research project, and ethical approval is taken from the authors' affiliated university. This study surveyed students at a public university in northern Bangladesh. This study used purposive sampling to identify social media users attending online classes, university students not high schools, and those who use social media regularly, particularly Facebook Messenger. The criteria used included respondents at least 18 years old, regular social media users, and attending online classes during COVID-19. The researcher sent invitations randomly to potential participants through Facebook Messenger online class groups with the help of their colleagues and class representatives. All questions were compulsory to avoid bias in filling up the missing responses. The study focused on only three personal factors about social media users, including the most used platform, daily usage hours, and gender.

The G* power analysis indicated a sample size of 119 respondents, but 226 voluntary responses were recorded during April and May 2022 in the COVID-19 situation. Several factors might have caused the low response rate during the COVID-19 pandemic. The number of students who attended the online classes was not equal to the number of students who presented physically in universities in Bangladesh due to an underprivileged e-learning system, electricity and internet disruptions in rural areas, and students' reluctant attitudes to attend all the classes, as claimed in the contemporary literature (Shrestha, Haque, Dawadi, & Giri, 2022). This kept many students out of the current online survey in the short period between April and May. Due to analyzing data quickly to meet the graduate researchers' examination requirements, the survey was conducted in such a short period.

3.2 Measures and Analysis

The study measured university students' social media use frequency, gender, and platform with a categorical scale, while the main variables were measured with a 7-point Likert scale. University students' perception of self-control was measured with four items adapted from the brief self-control scale (Tangney, Baumeister, & Boone, 2004). Also, four items were adapted from the prosocial feeling scale (Luengo Kanacri et al., 2021) to measure prosocial norms (Table 1). Two items were adapted from Jones and Mitchell's (2016) digital citizenship scale (I always justify before posting/sharing/commenting on photos/videos/texts so that it does not go the wrong way/embarrass others and I will never share or do not add to arguments and insulting interactions to rumors) to measure intended self-control behavior.

Also, two items were adapted from Erreygers et al.'s (2018) adolescents' online prosocial behavior scale (I will console and support the victims and I will guide my friends on using social media more efficiently/acceptably) were used to measure intended prosocial behavior. Moreover, two broad statements were adapted from Jones and Mitchell's (2016) digital citizenship scale (I am intended to present myself online as someone making positive choices, and I am intended to use social media for education, creative learning, and knowledge sharing on positive social, economic, environmental, cultural, or religious matters) to measure desired beneficial use. Simple descriptive statistics were analyzed using SPSS. Also, the hypotheses were analyzed using the structural equation modeling technique based on the CB-SEM facilities offered by SmartPLS 4.

4. Results

4.1 Respondents' Profile and Descriptive Statistics

This study's results reveal that Facebook is the primary social media platform for most students, with over 70% using it, followed by YouTube (10.6%), Messenger (5.3%), and WhatsApp (3.5%). On the other hand, Twitter, Instagram, and Pinterest are the least popular platforms (< 2%) in Bangladesh. This study found that mean perceptions (Table 1) are greater than six for almost all items on a seven-point scale. So, the university students show strong agreement on (Table 1 and Figure 2) on the significant presence of self-control (average 92.3%) and prosocial norms in them (average 94.5%). This indicates that students perceive self-control and prosocial norms are positive social media behavior markers.

Table 1. Descriptive statistics

Items and constructs	Statistics			
	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
Perception of Self-control (PSC)				
Resist short-term temptation	6.07	1.05	-1.11	1.31
Control over the situational/impulsive factors	6.01	1.09	-1.21	1.59
Refuse to do things that are bad for others	5.94	1.22	-1.27	1.49
Control yourself from doing something unexpected	6.03	1.10	-1.16	1.09
Perception of prosocial norms (PPN)				
Feel the necessity to support the victims	6.14	1.02	-1.69	4.96
Feel immediacy to sense a friend's discomfort online in advance of a request from them	6.09	1.06	-1.48	2.88
Feel emphatic with those who are in trouble	6.03	1.12	-1.20	1.17
Feel similarly to others for any good deeds on social media	6.00	1.10	-1.28	2.24

Note. N = 226.

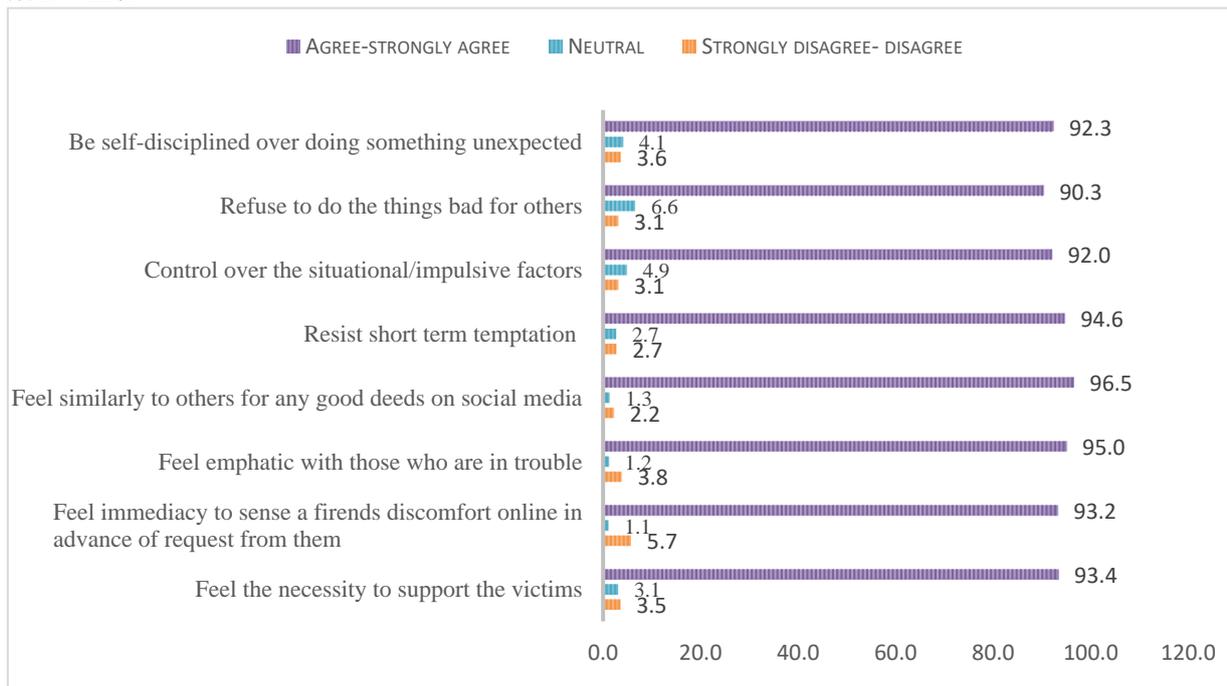


Figure 2. University students' perception of self-control and prosocial norms

4.2 Hypotheses Testing

The factor loadings of the items in the measurement model (Table 2: measurement and structural model fit) are acceptable. The explanatory power of the variables is excellent ($R^2 > 0.5$). Also, the composite reliability (CR) and average variance extracted (AVE) are in line with the suggested criteria in the literature (Hair, Risher, Sarstedt, & Ringle 2019) that ensure

the reliability of the model. Furthermore, the SRMR < 0.080, the Chi-square/df < 5, and CFI and IFI > 0.90 are also in the acceptable threshold (Hooper, Coughlan, & Mullen, 2008).

Table 2. The measurement and structural model fit

Factor loadings			Reliability		Model fit					
			R ²	SRMR	Chi-square/df	CFI	IFI			
			CR	AVE						
DBU	DBU1	0.780	0.838	0.722	0.835					
	DBU2	0.914								
PPN	PPN1	0.875	0.923	0.750						
	PPN2	0.894								
	PPN3	0.829								
	PPN4	0.864								
PSB	PSB1	0.897	0.896	0.812	0.724	0.079	3.992	0.909	0.910	
	PSB2	0.905								
PSC	PSC1	0.856	0.919	0.740						
	PSC2	0.866								
	PSC3	0.839								
	PSC4	0.879								
SCB	SCB1	0.892	0.854	0.746	0.750					
	SCB2	0.835								

Note. CR = Composite reliability. AVE = Average variance extracted. SRMR= Standardized root mean square residual. CFI = Comparative fit index. IFI= Incremental fit indices.

The correlations and covariance (Table 3) between the perception of self-control and prosocial norms are significant at $\alpha < .001$ level. Thus, hypothesis 1 (H1) is supported, suggesting that university students can have a strong perception of self-control and prosocial norms together. Also, Table 3 shows that the relationships between the perception of self-control and intended self-control behavior, the perception of prosocial norms and intended prosocial behavior and their associations with desired beneficial use are significant ($p < .05$). The β values falling between the LL (lower limit) and UL (upper limit) of 95% CIs based on the 5000 bootstrapped samples and the $t > 1.96$. Therefore, H2a, H2b, H3a, and H3b are supported based on these statistics recommended in structural equation modeling literature (Field, 2013; Hair et al., 2019). However, perceptions of prosocial norms have slightly higher predictability than perceptions of self-control on intended behavior and university students' desired beneficial use of social media in the structural model.

Table 3. The structural equation modeling results for hypotheses testing

Structural paths (hypotheses)	95% CI					Decision
	β	LL	UL	t	p	
PSC ↔ PPN (Correlations)	0.524	0.416	0.674	-	<.001	Supported
PSC ↔ PPN (Covariance)	0.751	0.584	0.892	-	.001	Supported
PPN → PSB	0.778	0.523	1.079	10.178	<.001	Supported
PSC → SCB	0.806	0.590	0.999	10.368	<.001	Supported
PPN → DBU	0.344	0.112	0.752	4.360	0.016	Supported
PSC → DBU	0.297	0.042	0.632	3.952	0.029	Supported

Note. N = 226. p = Level of significance

Moreover, no significant effects of gender or use of different social media platforms by the students on their self-control or prosocial behavior or desired beneficial use are found as ANOVA (Table 4) results show that the between groups and

within groups' sum of squares and F values are not significant ($p > .05$). So the structural paths or the hypotheses drawn in the study are valid regardless of the respondent's gender and use of social media platforms.

Table 4. ANOVA for differential effects of gender and types of social media use

Variables	Criteria	ANOVA					
		Sum of Squares		F		Sig.	
		GEN	SMP	GEN	SMP	GEN	SMP
Perception of self-control	Between Groups	.760	3.039	.825	.543	.365	.775
	Within Groups	206.405	204.126				
Perception of prosocial norms	Between Groups	.213	207.165	.247	1.318	.620	.250
	Within Groups	193.512	6.751				
Intended self-controlled behavior	Between Groups	2.067	186.973	2.054	1.160	.153	.329
	Within Groups	225.385	193.725				
Intended prosocial behavior	Between Groups	2.311	7.006	2.434	.960	.120	.453
	Within Groups	212.698	220.446				
Desired beneficial usage	Between Groups	1.521	227.451	1.643	.814	.201	.560
	Within Groups	207.421	5.513				

Note. $N = 226$.

5. Discussion

This study first explores the university students' perception of self-control and prosocial norms. It has been found that students substantially perceive the importance of self-control and prosocial norms concerning social media use. Moreover, this study has explored that self-control and prosocial norms are strongly positively correlated. They can co-exist among students and strongly influence their intended social media behaviour. This implies that students can control their social media conduct while engaging in more prosocial activities. Therefore, one factor cannot reduce another's influence on intention.

Furthermore, self-control and prosocial norms are also significantly associated with students' intended beneficial use of social media, including creative learning, knowledge sharing, and personal, economic, social, cultural, and religious benefits. Notably, the current study has not found any significant impact of the gender of the students and their choice of social media platform on the perception of self-control and intended self-control behavior or perception of prosocial norms and intended prosocial behavior. This implies that we can't predict whether a male or female can abuse social media more or less than its prosocial usage. We cannot say whether one social media platform can be more abused or prosocially used than others. However, it can be said that any individual using any social media platform can harm others by using them negatively or benefit themselves and others by using them positively.

These findings provide important theoretical contributions to understanding self-control and the prosocial behavior theories that are underresearched within social media literature. This study emphasizes the importance of both self-motivated and socially motivated factors to responsible social media conduct among university students. These results extend the self-regulation concept and align with social cognitive theory, which highlights the role of personal and social factors in shaping behavior.

From a practical standpoint, universities and educational institutions can develop programs to promote responsible and beneficial social media use among students. Social media platforms can also incorporate features that encourage self-control and prosocial behavior. At the same time, individuals can actively monitor their social media use and set goals to engage in more constructive and positive behaviors. While this study has limitations, such as a limited sample size from one university and cross-sectional data, future research can build upon these findings by conducting longitudinal or cross-cultural studies and expanding the constructs with more items.

6. Conclusion

This study highlights the significance of self-control and prosocial norms in promoting beneficial social media use among university students. The study's structural equation modeling-based results suggest that students with positive perceptions of self-control and prosocial norms are likelier to engage in disciplined and prosocial behavior while using social media for various benefits. Notably, self-control and prosocial feelings can intensively work in the same student. These findings align with universities or educational institutions that can implement programs to promote responsible and beneficial

social media use. Social media platforms can also introduce features that promote self-control and prosocial behavior. Individuals can monitor their social media use and aim to engage in positive and constructive behaviors. Overall, this study provides useful insights into promoting personal and social well-being through social media use among university students. In the future, a large-scale study can generalize the current findings.

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