

Mediating Role of Problematic Social Media Use in the Relationship Between Perceived Social Support and Academic Procrastination

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ABSTRACT

This study investigated the direct and indirect relationships between perceived social support and academic procrastination, mediated by Problematic Social Media Use, based on the Interaction of Person-Affect-Cognition-Execution (I-PACE) model. The sample comprised 354 Iranian high school students (60% female), who completed the Multidimensional Scale of Perceived Social Support, the Bergen Social Media Addiction Scale, and the Procrastination Assessment Scale-Students. The instruments' validity was confirmed using Confirmatory Factor Analysis, while reliability was assessed with Cronbach's alpha coefficient. The results of Structural Equation Modelling indicated that perceived social support has a significant negative effect on both academic procrastination and Problematic Social Media Use. Moreover, Problematic Social Media Use was found to play a significant mediating role in the link between perceived social support and academic procrastination. Overall, a decline in perceived social support from family, friends, and significant others prompts individuals to seek support through unregulated social media use, which subsequently contributes to academic procrastination.

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Introduction

Social media has evolved into a popular leisure activity among adolescents, providing spaces where users are allowed to create both public and private profiles. Social media is defined as a collection of applications that allow users to design, produce, and manage specific content and profiles while facilitating communication within virtual communities. These media include social networking sites and messaging applications (e.g., WhatsApp, Instagram, Facebook, etc.) ([Rozgonjuk et al., 2020](#)). Using online platforms is not inherently harmful and offers undeniable benefits. However, empirical research highlights that adolescents often engage with multiple social media applications simultaneously. Excessive use of social media can cause a negative impact on users' personal, social, and professional lives ([Bányai et al., 2017](#)). Despite its significant and beneficial role in modern life, unregulated social media use has been linked with harmful consequences, garnering attention from researchers and health professionals ([Rozgonjuk et al., 2020](#)). Prolonged usage of electronic devices and social media may result in symptoms of addiction, referred to as “problematic use”, with individuals exhibiting these symptoms classified as problematic users ([Field, 2018](#)). [Andreassen and Pallesen \(2014\)](#) define Problematic Social Media Use (PSMU) as “being overly concerned about social media, driven by an uncontrollable motivation to log on to or use social media, and devoting so much time and effort to social media that it impairs other important life areas”. Unhealthy engagement with these platforms can thus have detrimental effects on various areas of users' lives.

Several frameworks have been developed to explain why and how individuals engage in harmful patterns of Internet and related platforms use. One prominent framework is the I-PACE Model, which highlights the interaction between key predisposing factors and various psychological and behavioral processes. These include core characteristics, subjectively perceived situation, coping styles, cognitive and affective responses, and the decision to engage with particular applications. According to this model, a persons' core traits (e.g., personality, psychopathological features, social cognitions, biopsychological constitution, and specific usage motivations) have a crucial role in their decision to use and obtain gratifications from particular applications. Over time, these factors can facilitate the emergence of Internet-use-related disorders ([Brand, 2016](#)). Empirical research on PSMU has identified various predisposing factors and consequences. For instance, [Tang et al. \(2016\)](#) suggests that individuals' motivation to maintain interpersonal relationships contributes to PSMU, turning perceived social support into one of the most critical predisposing factors for this behavior ([Benvenuti et al., 2024](#); [Bilgin and Taş, 2018](#); [Hou et al., 2021](#); [Lin et al., 2018](#); [Meshi & Ellithorpe, 2021](#); [Qi et al., 2024](#)). On the other hand, excessive engagement with social media applications has been shown to significantly disrupt students' academic activities, often manifesting as academic procrastination ([Anierobi et al., 2021](#); [Aznar-Díaz et al., 2020](#); [Geng et al., 2018](#); [He, 2017](#); [Lian et al., 2018](#); [Narci, 2022](#); [Serrano et al., 2022](#); [Türel & Dokumaci, 2022](#); [Wartberg et al., 2021](#)). Thus, this study intends to explore the relationship between perceived social support and academic procrastination, emphasizing the mediating role of PSMU in the context of the I-PACE framework.

Perceived social support and PSMU

Social support can be described as support provided by family, neighbors, institutions and friends which strengthens psychological resilience and helps individuals in emotional, physical, and cognitive aspects. This term encompasses physical and psychological assistance offered in specific circumstances to fulfill essential social needs such as love, loyalty, self-esteem, and feeling of being part of a group ([Gülaçti, 2010](#)). In the research literature, social support is typically categorized into two types: perceived social support and received social support. Perceived social support represents a person's subjective evaluation of whether the social network is sufficiently supportive, encompassing the sources of support that can be identified and measured during times of need ([Gülaçti, 2010](#)). In contrast, received social support refers to the real helping behaviors provided by others. While received support focuses on tangible actions, perceived support reflects the expectation that this sort of assistance will be available in case of need ([Norris & Kaniasty, 1996](#)). Research findings suggest that perceived social support exerts a more significant impact on mental health than received social support. Individuals require support in various aspects of life, and close personal

interactions often provide greater satisfaction ([Gülaçti, 2010](#)). Conversely, inadequate or misplaced support from social environments can result in negative outcomes, including maladjustment, substance abuse, criminal behavior, anxiety, and negative emotions ([Gülaçti, 2010](#)). Feelings of social isolation often drive individuals to view the Internet as an escape mechanism for coping with loneliness. In particular, they may use these applications to satisfy their need for social connection, which can lead to maladaptive behaviors ([Andangsari et al., 2018](#)).

Factors such as social approval and peer acceptance significantly influence technology use, particularly during adolescence. Research suggests that individuals with limited social relationships, despite poor interpersonal skills, often seek online connections, and their maladaptive cognitions contribute to problematic use of these platforms ([Davis, 2001](#)). On the other hand, social support has been shown to enhance problem-solving abilities and social monitoring skills, implying that individuals who do not receive adequate social support, are more likely to struggle in these areas ([Yang et al., 2023](#)). Considering the literature and research gap, the present study considers perceived social support as a predictor of PSMU among school students.

Perceived social support and academic procrastination

Procrastination is broadly defined as “the act of needlessly delaying tasks to the point of experiencing subjective discomfort in an all-too-familiar problem” ([Solomon & Rothblum, 1984](#)). Procrastination is commonly seen as a failure of the self-regulation system, marked by a deficiency in motivation and self-control to accomplish goals ([Yang et al., 2023](#)). Research indicates that procrastination is linked to negative emotions like anxiety, depression, shame, and self-blame ([Balkis, 2013](#)). Although procrastination can occur in various areas, it is most frequently observed in academic settings. Academic procrastination refers to the irrational inclination to postpone beginning or finishing academic tasks ([Balkis, 2013](#)) or to delay academic responsibilities to the extent that achieving the desired outcomes becomes unlikely, causing psychological distress ([Malkoc & Mutlu, 2018](#)). This behavior is highly prevalent among students ([Balkis, 2013](#); [Batoool et al., 2017](#); [Sari & Fakhroddiana, 2019](#)) and is regarded as a significant barrier to academic progress and success ([Andangsari et al., 2018](#); [Balkis, 2013](#); [He, 2017](#); [Sari & Fakhroddiana, 2019](#)). Recent studies have identified a correlation between perceived social support from family, school, and friends, and students' tendencies to academic procrastination ([Erzen & Çikrikci, 2018](#); [Lai & Lin, 2018](#); [Yang et al., 2023](#)). Advice and support received from people in a student's social environment can often provide the motivation needed to complete tasks such as homework and academic papers ([Madjid et al., 2021](#)). The perception of support from significant individuals can alter how a person evaluates and approaches a problem, making them feel more capable of reaching their goals. This sense of empowerment enhances their willingness to act, and reduces procrastination ([Yang et al., 2023](#)).

Since procrastination is seen as a self-regulation system breakdown, social support can play a crucial role in enhancing individuals' self-regulatory and coping mechanisms, such as managing emotions, thoughts, and behaviors. Accordingly, evidence suggests that students with access to strong physical and psychological support systems are less likely to procrastinate when they perceive social support from close relationships ([Yang et al., 2023](#)). In this context, the current research considers perceived social support as a potential factor in predicting academic procrastination.

The mediating role of PSMU

The I-PACE model suggests that PSMU arises from personal motivations and characteristics, negatively impacting adolescents' psychological, social, and adaptive functioning, ultimately reducing their academic achievement ([Tezer et al., 2020](#)). Many students participate in various online activities that often distract them from their daily responsibilities. [Anam-ul-Malik and Rafiq \(2016\)](#) investigated how social support, personality traits (neuroticism and extraversion), and loneliness contribute to the development of Internet addiction and its connection to procrastination. Their findings indicated that online social support, neuroticism, and loneliness had significant associations with Internet addiction. Moreover, even after controlling for neuroticism, age, loneliness, gender, and online social support, Internet addiction remained

a significant predictor of procrastination. Similarly, [Andangsari et al. \(2018\)](#) revealed that problematic Internet use, driven by feelings of loneliness, is a predictor of academic procrastination.

Researchers suggest that effective time management is essential for students to handle their academic tasks and responsibilities, yet procrastination remains a significant barrier to this process ([Çelikkaleli & Akbay, 2013](#)). Students who engage in PSMU often fail to allocate sufficient time to their academic duties, instead postponing or neglecting them in favor of time spent on social media. Studies also indicates that students prone to academic procrastination tend to use media and technology more frequently, compared to those who exhibit minimal or no procrastination behaviors ([Hong et al., 2021](#); [Türel & Dokumaci, 2022](#); [Yang et al., 2019](#)). However, although several researches explore the link between social media and technology use and academic procrastination, relatively few focus on school-aged students ([Türel & Dokumaci, 2022](#)).

Present study

This study seeks to contribute to the understanding and development of the I-PACE model by exploring the mediating role of PSMU in the relationship between perceived social support and academic procrastination. Accordingly, the proposed research model (Figure 1) positions perceived social support as a predisposing factor and academic procrastination as a negative outcome of PSMU within the I-PACE framework. Based on existing literature, research hypotheses were formulated as below:

H1: perceived social support is positively associated with academic procrastination.

H2: perceived social support is positively associated with PSMU.

H3: PSMU mediates the relationship between PSMU and academic procrastination.



Figure 1. Study model

Method

Sample and Sampling Method

The research sample was comprised of 400 Iranian high school students, both male and female, selected using a multi-stage cluster random sampling method. After excluding distorted, incomplete, and invalid

responses, 354 responses were statistically analyzed and reported. The demographic information of the respondents is provided in Table.

Table 1. Demographic information of the participants (N = 354)

Gender		Girls		Boys		Total			
Grade	Field	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
10 th	Mathematics	0	0	21	5.93	21	5.93		
	Experimental sciences	57	16.09	29	8.19	86	24.29	175	49.4
	Humanities	48	13.55	20	5.65	68	19.2		
11 th	Mathematics	0	0	10	2.82	10	2.82		
	Experimental sciences	53	14.96	21	5.93	74	20.9	179	50.6
	Humanities	57	16.09	38	10.74	95	26.83		
Total		215	60.7	139	39.3	354	100	354	100

Tools Used

Multidimensional Scale of Perceived Social Support (MSPSS)

[Zimet et al.'s \(1998\)](#) Multidimensional Scale of Perceived Social Support (MSPSS) is a 12-item questionnaire created to assess perceived social support using three subscales: family (items 3, 4, 8, and 11), significant others (items 1, 2, 5, and 10), and friends (items 6, 7, 9, and 12). Responses are recorded on a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), (e.g., There is a special person who is around when I am in need). This scale provides scores in the range between 12 and 84 for all of the items, and a score from 4 to 28 for every subscale, with greater scores reflecting higher perceived social support. In the original evaluation, the internal consistency coefficients were reported as 0.85 for the entire scale and 0.85, 0.75, and 0.72 for the family, friends, and significant others subscales, respectively. In an Iranian study conducted by [Bagherian-Sararoudi et al. \(2013\)](#) among healthy individuals, these coefficients were higher, calculated at 0.92 for the entire scale and 0.87, 0.89, and 0.92 for the family, friends, and significant others subscales, respectively.

To evaluate the validity of the questionnaire, a Confirmatory Factor Analysis (CFA) method was conducted. All items demonstrated satisfactory factor loadings, ranging from 0.75 to 0.87. Reliability was assessed using Cronbach's alpha, yielding coefficients of 0.89 for the entire scale and 0.87, 0.88, and 0.89 for the subscales of significant others, family, and friends, respectively. Regarding model fit, adjustments were made by plotting the covariance between two items (items 3 and 4) within the family subscale. This modification resulted in a favorable model fit, confirming alignment between the proposed model and the research data. [$\chi^2/df=2/11$, PNFI=0/73, PCFI=0/74, IFI=0/97, CFI=0/98, RMSEA=0/05, PCLOSE=0/23]

Bergen Social Media Addiction Scale (BSMAS)

The Bergen Social Media Addiction Scale ([Andreassen et al., 2017](#)), is a six-item instrument designed to measure social media addiction, which is derived from the Bergen Facebook Addiction Scale. Each item is scored using a 5-point Likert scale, ranging from 1 (very rarely) to 5 (very often). This tool was created by selecting items with the highest factor loadings for each of the six core components of addiction—mood

modification, salience, tolerance, conflict, withdrawal, and relapse—from an initial pool of 18 items. Participants are asked to reflect on their experiences with social media use over the past year (e.g. Felt an urge to use social media more and more). This scale gives a score ranging from 6 to 30, with higher scores indicating higher severity of PSMU. A score above 19 suggests that an individual may be at risk for PSMU ([Lin et al., 2017](#)).

The internal consistency coefficient of this questionnaire was 0.88 in the original research. In the study by [Bányai et al. \(2017\)](#), this coefficient was found to be 0.85. When the tool was translated into Persian for use with the Iranian adolescent population, [Lin et al. \(2017\)](#) reported an internal consistency coefficient of 0.86. Similarly, [Salehi et al. \(2023\)](#) achieved a coefficient of 0.88 when using the scale among Iranian adolescents and youth. In the present study, Cronbach's alpha was utilized to assess the reliability of the scale, yielding a satisfactory value of 0.81. Concerning scale validity, CFA results revealed acceptable factor loadings for that all items ranging from 0.51 to 0.71 and model fit indices reflected favorable values. [$\chi^2/df=2/64$, PNFI=0/58, PCFI=0/59, IFI=0/97, CFI=0/97, RMSEA=0/06, PCLOSE=0/16]

Procrastination Assessment Scale-Students (PASS)

This questionnaire, originally developed by [Solomon and Rothblum \(1984\)](#), consists of 27 items divided into three subscales: exam preparation (6 items), assignment preparation (11 items), and term paper preparation (8 items) (e.g., I tend to fantasize when I am studying for an exam). Participants rate the level of their agreement with the items on a 5-point Likert scale ranging from 1 (never) to 5 (always). Ten items (2, 4, 6, 11, 13, 15, 16, 21, 23, and 25) are reverse-scored. The original study established the reliability of the scale with a Cronbach's alpha of 0.64 and an internal consistency coefficient of 0.84. Furthermore, [Jokaar and Delaavarpoor \(2008\)](#) reported a reliability coefficient of 0.92 for the scale using Cronbach's alpha.

In the current study, the 27-item version of the questionnaire was employed. To evaluate its validity, CFA was conducted and Items with factor loadings below 0.3 were removed from the model, including item 7 from the exam preparation, items 18 and 19 from the assignment preparation, and items 26 and 27 from the term paper preparation subscales. After removing these items, CFA was repeated, yielding desirable factor loadings for the remaining items. Cronbach's alpha was used to assess reliability, resulting in coefficients of 0.91 for the overall questionnaire and 0.81, 0.80, and 0.83 for the exam preparation, assignment preparation, and term paper preparation subscales, respectively. Concerning model fit, adjustments were made by plotting the covariance between two items (items 21 and 25) within the term paper preparation subscale, resulting in a favorable model fit. [$\chi^2/df=2/09$, PNFI=0/76, PCFI=0/81, IFI=0/92, CFI=0/91, RMSEA=0/05, PCLOSE=0/09]

Procedure

Authorized by the Department of Education and school administrators, the questionnaires were completed voluntarily by students. Before distribution, students were given clear instructions on how to complete the questionnaires and anonymity and confidentiality of respondents were reassured. This study is derived from a master's thesis in Educational Psychology. To statistically analyze the data in this study, descriptive statistics of the research variables, including central tendencies and measures of dispersion were calculated using SPSS software (version 26). Subsequently, path analysis and Structural Equation Modeling (SEM) were conducted with AMOS software (version 24) to assess the fit indices of the research model and examine the relationships among the variables within the research model.

Results

Regarding the descriptive statistics, the means and standard deviations (SD) of the research variables and their subscales are reported in Table. The mean scores for the perceived social support subscales ranged from 13.82 to 15.65, while the academic procrastination subscales ranged from 15.48 to 20.76. The mean score for PSMU was 16.82, which falls below the threshold for diagnosing problematic use. The correlation

matrix of the research variables, presented in Table 1, reveals that correlations within each construct are higher than those between different constructs, indicating the presence of discriminant validity.

Table 2. Descriptive results

Variable	Factor	Mean	SD	Minimum	Maximum
Perceived Social Support	Significant others	14.80	4.34	4	20
	Family	15.65	4.05	4	20
	Friends	13.82	4.33	4	20
PSMU		16.82	5.81	6	30
Academic Procrastination	Exam	20.16	4.74	9	35
	Homework	20.76	5.85	9	40
	Term paper	15.48	4.35	6	27

Table 1. Correlation matrix

Variables	1	2	3	4	5	6	7	8	9
1. Perceived Social Support	1								
2. PSMU	-0.21**	1							
3. Academic Procrastination	-0.33**	0.58**	1						
4. Significant others	0.83**	-0.12*	-0.19**	1					
5. Family	0.76**	-0.30**	-0.43**	0.49**	1				
6. Friends	0.76**	-0.10*	-0.17**	0.45**	0.34**	1			
7. Exam	-0.27**	0.54**	0.84**	-0.15**	-0.36**	-0.13**	1		
8. Assignment	-0.27**	0.47**	0.89**	-0.13**	-0.36**	0.15**	0.59**	1	
9. Term paper	-0.34**	0.53**	0.88**	-0.23**	-0.42**	-0.18**	0.64**	0.69**	1

* $p < 0.05$; ** $p < 0.01$

Prior to conducting SEM, the basic assumptions including normality, collinearity and multicollinearity were examined and confirmed. With the measurement model validated, the structural model was assessed based on three main criteria: the predictive relevance of the model, the significance of the path coefficients, and the R^2 values (Hair et al., 2011). As shown in Figure , the R^2 value for academic procrastination was 0.59, indicating that 59% of its variance is explained by perceived social support and PSMU. For PSMU, the R^2 value was 0.11, meaning that 11% of its variance is explained by perceived social support.

The bootstrapping results (Figure , Table 3) reveal that perceived social support has a significant negative effect on academic procrastination ($p < 0.001$, $\beta = -0.49$), supporting H1 of the study. Similarly, perceived social support significantly and negatively predicts PSMU ($p < 0.004$, $\beta = -0.27$), confirming H2. Furthermore, the results indicate that perceived social support indirectly and significantly predicts academic

procrastination through PSMU ($p < 0.001$, $\beta = -0.21$), supporting H3. The fit indices presented in Table 2 demonstrate that the research model exhibits a good fit across all three categories: absolute, comparative, and parsimonious.

Table 2. Goodness of Fit Indices

	χ^2/df	PNFI	PCFI	IFI	CFI	RMSEA	PCLOSE
Amount	2.57	0.70	0.73	0.95	0.94	0.06	0.025

Table 3. Direct, indirect, and overall effects of the structural equation model related to the study variables

Criterion variable	Academic Procrastination		
Predictor variables	Total effect	Direct effect	Indirect effect
Perceived Social Support	-0.49**	-0.29**	-0.21**
PSMU	0.62*	0.62*	--

* $p < 0.01$; ** $p < 0.001$

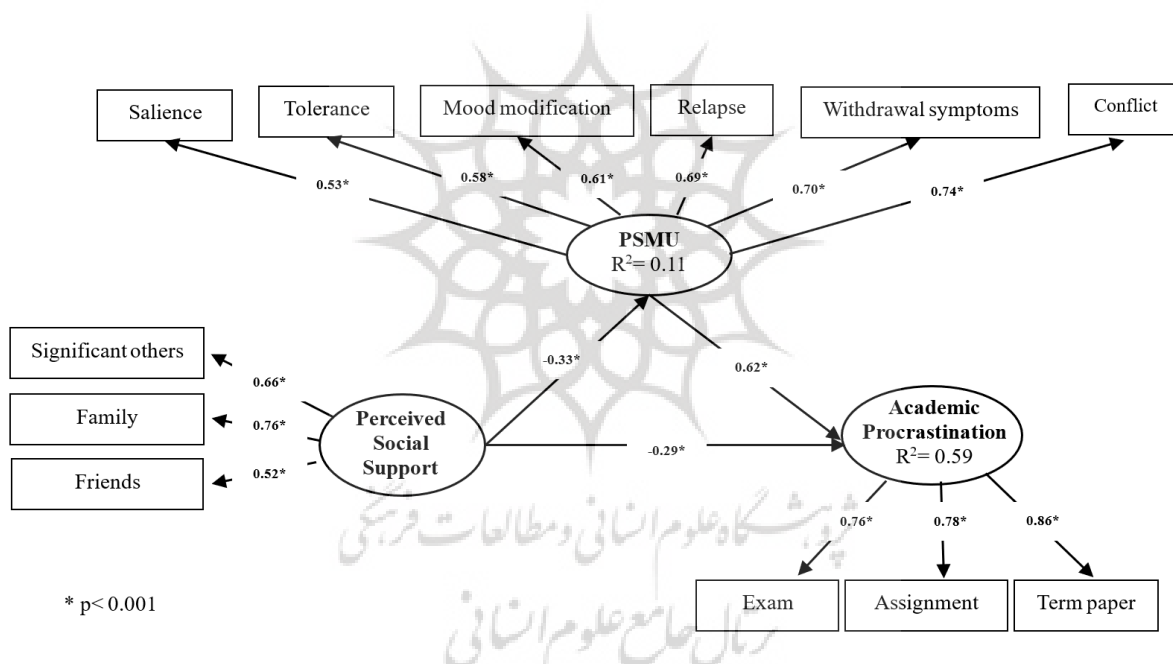


Figure 2. Tested model of the structural relationships

Discussion

The objective of this study was to examine the role of PSMU as a mediator in the relationship between perceived social support and academic procrastination within the framework of the I-PACE model. In light of previous research, three hypotheses we postulated, all of which were supported by the findings.

The relationship between perceived social support and academic procrastination

The analyses conducted to examine the first hypothesis confirmed that perceived social support negatively and significantly predicts students' academic procrastination. This finding aligns with previous studies reporting a significant negative relationship between perceived social support and academic procrastination

([Irwansyah et al., 2021](#); [Li, 2023](#); [Madjid et al., 2021](#); [Muarifah et al., 2022](#); [Sari and Fakhruddiana, 2019](#); [Won and Shirley, 2018](#); [Yang et al., 2023](#)). However, it contrasts with studies that reported a positive and significant link between these two variables ([Qi et al., 2021](#); [Tyas and Soetjiningsih, 2024](#)).

Social support has a significant role in developing self-regulatory and coping strategies, including individuals' ability to manage thoughts, emotions, and behaviors. This, in turn, can help decrease procrastination by leaving a positive impact on internal psychological procedures related to coping and self-regulation ([Yang et al., 2023](#)). To address academic procrastination, students require affirmation, genuine self-esteem, and a sense of belonging. Perceived social support significantly boosts self-esteem, fostering a sense of predictability and stability that contributes to overall well-being. Furthermore, when students receive feedback and guidance during evaluative procedures, they grow to be more optimistic about their progress, more concentrated on finishing their assignments, and ultimately avoid procrastination ([Sari & Kusumaningrum, 2022](#)). Additionally, these students have different perception of challenges and are more likely to develop self-confidence, set achievable goals, and take practical actions to accomplish them ([Zhang et al., 2024](#)). Emotional support, provided through attention, empathy, and care, contributes to more positive life experiences, a better outlook on life, and a sense of comfort, love, and security. This emotional foundation enhances self-esteem, which in turn increases academic motivation, drives goal pursuit, and reduces academic procrastination ([Kristy, 2019](#)). Social support from close social connections can promote desired behaviors and reduce procrastination. Building strong relationships with family, peers, close friends, and others in their environment allows students to feel valued, appreciated, and cared for. This sense of support fosters calmness and strengthens their ability to tackle problems effectively ([Zhang et al., 2024](#)). In general, healthy relationships serve as a positive reinforcement. Through these connections, individuals can receive assistance, advice, and guidance, enabling them to overcome challenges and find solutions to the obstacles they encounter ([Irwansyah et al., 2021](#)).

The contradiction between these results and some previous findings ([Chee et al., 2021](#); [Tyas and Soetjiningsih, 2024](#)) can be elucidated by pointing out that the provided support is not always aligned with the individual's needs. According to [Cutrona and Russell \(1990\)](#), social support consists of five dimensions: esteem support, emotional support, informational support, network support, and instrumental support. For instance, students may access the information they need to address academic challenges through various sources, such as the Internet, reducing their reliance on informational support. However, due to a lack of meaningful social connections, they might need feedback on their performance, which falls under esteem support. If the support provided does not match their specific needs, such as receiving informational support when esteem support is required, a positive outcome cannot be expected ([Kristy, 2019](#)). In addition, the effectiveness of social support depends on how individuals perceive it. Social support can influence behavior by shaping emotions and cognition. Support provided by others' actions is referred to as received support, while perceived support reflects an individual's sense of comfort, care, and availability of assistance. Sometimes, students interpret the social support they receive as reassurance that help is always available (perceived support). In these cases, misinterpretation of the type of support from friends may lead to a false sense of security, reducing anxiety and inadvertently encouraging procrastination. As a result, students delay academic tasks, believing there is no urgency to complete them ([Tyas and Soetjiningsih, 2024](#)). In general, procrastination is generally influenced by two categories of factors: external factors, such as environmental conditions and social support, and internal factors, including stress, motivation, and fatigue ([Fauziah, 2015](#)). When individuals accurately understand the social support they receive, and

perceive it as meeting their specific needs, this support can effectively reduce academic procrastination in them.

The relationship between perceived social support and PSMU

Our findings revealed a significant negative relationship between perceived social support and PSMU (H2), aligning with findings of previous investigations, including [Benvenuti et al. \(2024\)](#), [Bilgin and Taş \(2018\)](#), [Hou et al. \(2021\)](#), [Lin et al. \(2018\)](#), [Meshi and Ellithorpe \(2021\)](#), and [Qi et al. \(2024\)](#).

Social support has significant function in maintaining mental health, acting as a protective shield against stressful events while fostering feelings of love, care, value, and respect. Ultimately, it cultivates a sense of dignity and self-worth. The greater an individual's perception of support from family, friends, and others, the better they can cope with environmental pressures, experience psychological calmness, achieve higher life satisfaction, and grow a stronger sense of belonging to a social group, thereby reducing problematic behaviors ([Gunuc and Dogan, 2013](#)). Perceived social support also enhances an individual's ability to engage in leisure activities that require social interaction, mitigating feelings of loneliness. Given that loneliness and insufficient leisure time are risk factors for mental health deterioration, high levels of perceived social support can prevent mental health challenges and unhealthy behaviors ([Hou et al., 2021](#)). Conversely, when individuals lack this support, social media and virtual interactions often replace real-life connections. According to social learning and social control theories, adolescent behavioral problems often stem from family dynamics. These perspectives emphasize that the social support and control provided through parent-adolescent relationships reduce the likelihood of behavioral issues, such as unhealthy use of the Internet and related platforms ([Gunuc and Dogan, 2013](#)). Therefore, as real-life social support from family and friends declines, individuals increasingly turn to online social networks, which can cause the development of problematic behaviors ([Bilgin and Taş, 2018](#)).

According to [Konan et al. \(2018\)](#), social support enhances resilience by providing a sense of reassurance during stressful situations and challenges. Support from family or external sources fosters a feeling of not being alone. In contrast, a lower level of received or perceived social support may drive individuals to seek online alternatives. The gratification derived from online social support can result in problematic use of smartphone features ([Zhao et al., 2021](#)). When parents and children engage in mutual, appropriate, and constructive interactions, and adolescents maintain healthy communication with their family, they are more likely to share their needs and problems with them. This reduces their reliance on false online connections and minimizes the risks associated with PSMU. However, when family members fail to provide adequate social support or fail to create warm and intimate relationships, adolescents may feel lonely and turn to cyberspace to fill their emotional void and seek the support they lack. The satisfaction gained from meeting these needs through social media encourages more frequent and prolonged usage, which can eventually lead to PSMU ([Chou & Hsiao, 2000](#); [Davis, 2001](#)). However, only real-life social support contributes to higher well-being, while online social support or perceived support through social media is ineffective in achieving the same outcome. Individuals with limited interpersonal relationships, who cannot find the support they need offline, are more likely to take refuge in social media to fulfill their unmet needs. This dependence often escalates into symptoms of PSMU ([Bilgin and Taş, 2018](#)).

The mediating role of PSMU in the relationship between perceived social support and academic procrastination

Our results demonstrated that PSMU is a positive and significant predictor of academic procrastination, corroborating previous studies in this field ([Anierobi et al., 2021](#); [Aznar-Díaz et al., 2020](#); [Geng et al., 2018](#); [He, 2017](#); [Lian et al., 2018](#); [Narci, 2022](#); [Serrano et al., 2022](#); [Türel and Dokumaci, 2022](#); [Wartberg et al., 2021](#)). Additionally, our findings indicated that PSMU significantly mediated the relationship between perceived social support and academic procrastination, aligning with prior findings ([Anam-ul-Malik and Rafiq, 2016](#); [Andangsari et al., 2018](#)).

To elucidate the connection between PSMU and academic procrastination, neuroscience research indicates that excessive Internet use alters brain structure and impairs the prefrontal cortex functions, which governs

self-control ([Pan et al., 2018](#); [Steel & König, 2006](#)). Accordingly, individuals exhibiting PSMU tend to demonstrate reduced self-control. According to the Temporal Motivation Theory (TMT), diminished self-control is considered a key predisposing factor for procrastinatory behavior ([Steel & König, 2006](#)). Along with this theory, procrastinators tend to prioritize short-term rewards over long-term benefits. As a result, they might temporarily evade academic tasks and involve in enjoyable online activities, due to the immediate psychological gratification these activities provide. In this context, individuals with PSMU often become preoccupied with their devices, dedicating excessive time to online activities. This lack of control can consume time allocated for learning, leading to delays in starting and completing tasks. Furthermore, Davis's cognitive-behavioral theory suggests that individuals experiencing PSMU invest significant time and cognitive resources into using these media, often at the expense of their professional, social, and personal offline responsibilities ([Lian et al., 2018](#)). Consequently, students lose track of time while using social media, neglect their academic responsibilities such as completing assignments, preparing for exams, or adhering to schedules, and ultimately become prone to academic procrastination ([Narci, 2022](#)).

The mediating role of PSMU in the relationship between perceived social support and academic procrastination can be well explained based on the I-PACE model. This model highlights the interplay between social cognitions and their negative consequences, emphasizing the role of using an Internet platform as a mediating factor. Individuals with low self-esteem resulting from a lack of social support often take refuge in social media as a means of coping, as they struggle to assert their presence in real-life social contexts. Given that low self-esteem, influenced by a lack of social support, directly affects self-control ([Geng et al., 2018](#)), those who do not feel supported in their offline environments are more likely to seek solace in social media, devoting a significant amount of time to it. This excessive engagement leads to neglect of academic responsibilities and fosters academic procrastination. Moreover, students with PSMU tend to reinforce their negative self-perceptions, further weakening their self-esteem and increasing self-denial. In essence, problematic social media and Internet use diminishes self-evaluation, which subsequently impairs self-control ([Geng et al., 2018](#)). With reduced self-control, students face difficulty in managing their time and regulate their behaviors. The increased reliance on social media distracts them from their academic tasks, causing them to postpone assignments, disregard schedules, leave exam preparation to the last minute, and ultimately delay academic responsibilities, thereby exacerbating academic procrastination ([Narci, 2022](#)).

Future direction and Implications

While this research provides valuable insights, it has particular limitations that can be addressed by future research. First, the cultural context has a significant impact on using social media and its subsequent results, which restricts the generalizability of the findings to other societies, cultures, and ethnic groups. Second, as the study employed a cross-sectional and correlational design, caution is needed when interpreting causal relationships based on the results. Moreover, the study focused on high school students, meaning the findings cannot be directly applied to other age groups. Considering the cognitive and metacognitive differences between high school and college students, a comparative study regarding individuals' need for social support, problematic social media use, and susceptibility to external influences is recommended.

These findings underscore the critical role that families and close social circles play in shaping teenagers' behavior, mental health, and academic performance. Educational courses for parents could be highly beneficial in preventing undesirable outcomes by equipping them with strategies to support their children effectively. Given the link between PSMU and academic procrastination, interventions regarding responsible and balanced media use may help mitigate procrastination. From a practical standpoint, this study highlights the importance of organized educational programs that promote the balanced use of social media and address the serious undesirable outcomes of its problematic use within educational contexts. Additionally, by raising students' awareness on potential academic and personal impacts of inappropriate

social media use, they are more likely to adopt effective management strategies and engage with social media in a more intentional and controlled manner, fostering better self-regulation and academic success.

Conclusion

This study explored how perceived social support, as a form of social cognition, influences the decision to engage with specific Internet applications or social media, in accordance with I-PACE framework. Depending on an individual's cognitive and emotional state, this usage may occur without proper control over its duration or manner, thereby manifesting negative consequences of PSMU. As social media begins to dominate one's life, other essential responsibilities, such as those related to work, education, career, and home, are often neglected. Poor time management, concentration problems, and a diminished sense of responsibility can contribute to academic procrastination. However, by regulating and limiting their time and approach to social media use, individuals can mitigate its potential negative effects and maintain a healthier balance in their lives.

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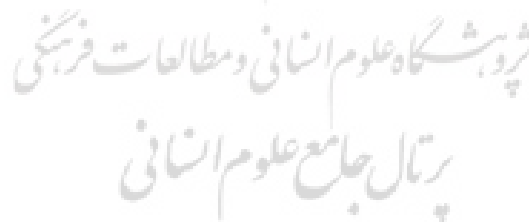
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