THE RELATIONSHIP BETWEEN LONELINESS AND SOCIAL MEDIA USE AMONG STUDENTS AT THE UNIVERSITY OF DANANG - UNIVERSITY OF SCIENCE AND EDUCATION

MỐI LIÊN HỆ GIỮA CÔ ĐƠN VÀ SỬ DỤNG MẠNG XÃ HỘI Ở SINH VIÊN TRƯỜNG ĐẠI HỌC SƯ PHẠM - ĐẠI HỌC ĐÀ NẴNG

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Abstract - This cross-sectional quantitative study examines the current state of perceived loneliness, social media use, and the relationship between these two components among students at The University of Danang - University of Science and Education. The study was conducted with 228 students using the UCLA Loneliness Scale III and a self-designed social media use questionnaire. Results indicate that the majority of students experience a high level of loneliness. The most frequently used social media platforms are Messenger, TikTok, and Facebook. Loneliness was negatively correlated with the usage frequency of Zalo and Messenger, as well as with purposes related to connection, communication, and relationship maintenance. Multiple linear regression analysis was conducted to assess the impact of platform usage including Zalo, Messenger, and X, as well as specific usage purposes, on loneliness. The model accounted for approximately 22.5% of the variance in loneliness ($R^2 = 0.225$, $p < 0.05$).

Key words - Loneliness; social media; student

Tóm tắt - Nghiên cứu định lượng cắt ngang này trình bày thực trạng mức độ cảm nhận cô đơn, sử dụng mạng xã hội và mối liên hệ giữa hai thành tố này của sinh viên Trường Đại học Sư phạm – Đại học Đà Nẵng. Nghiên cứu được thực hiện trên 228 sinh viên thông qua thang đo cô đơn UCLA III và bảng hỏi sử dụng mạng xã hội tự thiết kế. Kết quả cho thấy, đa số sinh viên có cảm nhận cô đơn ở mức cao. Các nền tảng mạng xã hội được sử dụng nhiều là Messenger, TikTok và Facebook. Cô đơn có mối tương quan nghịch với mức độ sử dụng nền tảng Zalo và Messenger cũng như các mục đích kết nối, giữ liên lạc và duy trì mối quan hệ. Phân tích hồi quy tuyến tính được thực hiện để đánh giá tác động của các nền tảng Zalo, Messenger, X và một số mục đích sử dụng đến mức độ cô đơn. Mô hình hồi quy đa biến giải thích được khoảng 22,5% sự biến thiên của cô đơn ($R^2 = 0,225$, $p < 0,05$).

Từ khóa - Cô đơn; mạng xã hội; sinh viên

1. Introduction

Amy Sullivan, Ph.D. in psychology, stated that "Loneliness is an epidemic. We are the most socially connected society, yet so many people experience extreme loneliness" [1]. Research findings by Beutel and Peltzer indicate that loneliness is associated with poor mental health, substance use, aggressive behaviors, and other health-risk behaviors such as depression, generalized anxiety, and suicidal ideation [2], [3]. According to the latest report by DataReportal, as of October 2025, Vietnam had 79 million social media users, accounting for 77.6% of the country's total population [4]. Several studies have shown the influence of social media use on loneliness; for example, experiences of social comparison on social media increase feelings of loneliness [5], the deeper students immerse themselves in the virtual world, the more inclined they are to live in isolation within this online environment, leading to a risk of reduced real-life interaction [6], while loneliness drives individuals to turn to social media, and subsequent social media use further exacerbates their initial loneliness [7].

It can be observed that there exists a significant relationship between loneliness and social media use across different age groups, particularly among young people—individuals who were born and have grown up in the context of the rapid expansion of digital technology. For university students, an age group whose primary activities revolve around academic and career preparation, and for whom romantic relationships and friendships are of particular importance, social media plays an even more important role in their lives.

In Vietnam, several studies have examined loneliness across different age groups, such as loneliness among adults by Nguyen Thi Minh Lan [8], loneliness among adolescents by Ho Thi Truc Quynh et al. [9], as well as studies on social media use [10], [11]. While the effects of social media on psychology, learning, and social relationships have been analyzed in considerable detail, the relationship between loneliness and social media use has not yet been fully examined. In addition, previous studies have not simultaneously considered different aspects of social media use in relation to loneliness levels. Therefore, this study was conducted to investigate the current state of perceived loneliness, social media use, and the relationship between these two variables among students at The University of Danang - University of Science and Education (UD-UED), and to propose several recommendations to reduce loneliness among students and promote more appropriate social media use.

2. Theoretical framework

2.1. Related concepts

Studies on loneliness emerged very early and have been

defined from various schools of psychology. According to Weiss, loneliness is a response to the absence of a specific type of relationship, or more precisely, a response to the absence of a specific relational provision [12]. Peplau and Perlman argued that loneliness is a painful feeling accompanied by the perception that an individual's social needs are not adequately met in terms of the quantity or, especially, the quality of those social relationships [13]. Based on these definitions, we propose the following concept: "Loneliness is a subjective, distressing feeling of disconnection, accompanied by a deficiency in the quality of social relationships".

In the approach adopted in this study, we employ the theories of Daniel Perlman and Letitia Anne Peplau from an attributional perspective and view loneliness as the discrepancy between a person's desired level of social relationships and the level actually achieved. Loneliness is a multifaceted experience; however, the two authors examine its manifestations through four main domains: emotion, motivation, cognition, and behavior [14].

Social media is no longer an unfamiliar term in modern social life; it is a space that connects members with one another regardless of space or time. According to the definition by Boyd and Ellison, social networking sites are understood as "web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view the list of connections made by others within their system" [15]. Based on the context of this study, we analyzed and synthesized the following concept: "Social media is a space where users express themselves through a profile, establish and maintain connections, and share and receive content with others".

This study examines social media use in the following aspects: platforms used, purposes of use, duration of use, and usage behavior. Based on the psychological characteristics of this age group, namely a high need for connection with friends and the surrounding world, along with the primary activity of career-oriented learning combined with work, we selected the following platforms as the basis for surveying participants about their social media use: Facebook, TikTok, Zalo, Messenger, Instagram, YouTube, and X (Twitter). Phung Thanh Thao et al. found that among students, the purposes of social media use commonly include entertainment (96%), learning (61.5%), self-expression and emotional release (41.7%), job searching (39.8%), and doing business or earning money on social media (5.7%) [10]. In this study, we examine several purposes of students' social media use, such as staying in touch with family and friends, learning, filling leisure time, sharing life, and searching for jobs. Depending on the purposes and modes of interaction on social media platforms, users' behaviors are often divided into two distinct types: active use and passive use. According to Underwood, active use generally refers to users posting content and engaging in interaction with the media they are viewing. In contrast, passive use generally refers to users consuming content on social media without performing interactive actions such as clicking "like" or leaving comments [16].

2.2. Studies on the relationship between loneliness and social media

The relationship between loneliness and students' social media use may occur in two directions. In the case of a positive association, this relationship is mutually reinforcing, in which the distress caused by a lack of real-life connection motivates students to turn to online platforms as a tool for social compensation. Conversely, excessive engagement in virtual interaction behaviors may increase subjective loneliness if these connections do not ensure genuine emotional quality. In the case of a negative association, an increase in students' social media use occurs simultaneously with a decrease in feelings of loneliness.

Considering the positive association, within the research community on this issue, there are still debates about the causal relationship between the two variables: whether excessive social media use causes loneliness, or whether loneliness leads to excessive social media use. Ramadhan and Maryam confirmed the hypothesis that the higher the intensity of students' social media use, the greater their feelings of loneliness, and vice versa [17]. Peibo Wu et al. conducted a one-year longitudinal study and showed that loneliness drives individuals to turn to social media in a negative way, and conversely, excessive social media use further exacerbates feelings of isolation [18]. In contrast, E. O'Day argued that loneliness is a risk factor for problematic social media use; individuals experiencing loneliness seek social support on social media, possibly to compensate for the lack of direct support resources [19].

In fact, in the opposite direction, there are still studies and theories supporting the view that social media is a tool for reducing loneliness, particularly when individuals focus on the quality of their interactions during use. The study by Burke et al. showed that directed communication on social media plays an important role in promoting close and deep relationships, such as those with family, friends, and spouses/partners, that is, bonding social capital, and in improving the psychological experience of loneliness [20]. In a meta-analysis by Tokunaga and Rains, it was suggested that Internet addiction is positively related to loneliness. Social media operates as a compensatory tool that provides stimulation and social support, helping individuals reduce feelings of isolation and strengthen community connectedness [21].

Based on the theoretical issues discussed above, we propose the following research model on the relationship between loneliness and social media use among students at UD-UED (Figure 1):

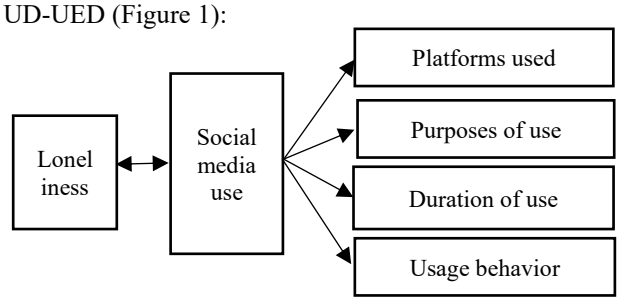


Figure 1. *Research model on the relationship between loneliness and social media use among students*

3. Research methodology

3.1. Research sample

The study was conducted based on data collected from 228 students at UD-UED. The research sample was selected using convenience sampling through direct questionnaire distribution at the university and online distribution via Google Forms. Of the participants, 49 were male students (21.5%) and 179 were female students (78.5%).

3.2. Measurement scales

This study employed the UCLA Loneliness Scale Version III developed by Russell (1996). In a sample of Vietnamese adolescents, this scale was adapted and used by Nguyen Thi Diem My et al., showing good reliability with $\alpha = 0.8$ [22]. The scale consists of 20 items, including 11 negatively worded items indicating loneliness and 9 positively worded items indicating non-loneliness; the positive items are reverse-scored. The scale is scored on a 4-point Likert scale ranging from 1 – Never to 4 – Very often. The total score ranges from 20 to 80: a total score below 28 corresponds to a low level of perceived loneliness/no loneliness; a total score from 28 to 43 corresponds to a moderate level; and a total score above 43 indicates a high level of loneliness. The Cronbach's Alpha reliability coefficient of the UCLA III scale in this study was 0.83.

In addition, we designed a questionnaire related to students' social media use across four aspects: platforms used, purposes of use, duration of use, and usage behavior. The Cronbach's Alpha reliability coefficients obtained from the study were 0.74 for the platform-use scale, 0.75 for the purpose-of-use scale, 0.75 for the passive-use behavior scale, and 0.81 for the active-use behavior scale.

3.3. Data analysis

The study used SPSS 27 software for data processing. Descriptive statistical methods were employed, including absolute frequency and relative frequency, to describe data on the study participants and research variables, as well as mean scores and standard deviations. Inferential statistical methods were also used, including mean comparison tests, namely the independent-samples t-test and one-way ANOVA, bivariate correlation analysis, and linear regression analysis.

4. Research results

4.1. Current state of loneliness among students at UD-UED

Table 1. *Loneliness levels among students at UD-UED*

Level	Frequency	Percentage (%)
Low	22	9.6
Moderate	96	42.1
High	110	48.2

The research results show that nearly half of the surveyed students perceived loneliness at a high level (48.2%), 42.1% at a moderate level, and only 9.6% at a low level/no loneliness (Table 1). This is a noteworthy result, indicating that the majority of students experience loneliness at moderate to high levels.

Table 2. *Expressions of loneliness among students*

No.	Expression	Mean	SD
1	I feel that I am "in tune" with the people around me	1.99	0.73
2	I feel that I lack companionship	**2.36**	0.92
3	I feel that there is no one I can turn to	2.16	0.94
4	I feel alone	2.26	0.95
5	I feel part of a group of friends	**1.74**	0.86
6	I feel that I have a lot in common with the people around me	2.07	0.81
7	I feel that I am no longer close to anyone	2.27	0.97
8	I feel that my interests and ideas are not shared by those around me	2.20	0.98
9	I feel outgoing and friendly	2.17	0.91
10	I feel close to people	1.83	0.85
11	I feel left out	1.95	0.95
12	I feel that my relationships with others are not meaningful	2.28	0.97
13	I feel that no one really knows me well	**2.42**	0.96
14	I feel isolated from others	2.11	0.93
15	I feel I can find companionship when I want it	2.22	0.88
16	I feel that there are people who really understand me	2.11	0.85
17	I feel shy	**2.36**	0.94
18	I feel that people are around me but not with me	2.14	0.83
19	I feel that there are people I can talk to	2.04	0.91
20	I feel that there are people I can turn to	1.94	0.83

The survey results using the UCLA version III scale show that the expression of loneliness with the highest mean score was "I feel that no one really knows me well" (Mean = 2.42). This expression indicates a lack of quality in students' relationships. It suggests that students' conversations may remain at the level of information exchange and social interaction, without progressing to self-disclosure. Two other expressions of loneliness among students were also at relatively high levels: "I feel that I lack companionship" (Mean = 2.36) and "I feel shy" (Mean = 2.36). When referring to companions, this is often described in situations where an individual encounters difficulties and needs support, or, in another sense, as the feeling of having someone present beside them. Regarding the feeling of being "shy", this is a common expression when individuals focus excessively on how others evaluate them. This may become a barrier to communication, thereby hindering students from building trustworthy relationships.

4.2. Current state of social media use among students at UD-UED

4.2.1. Students' levels of use of social media platforms

The chart below presents the levels of use of social media platforms among students at UD-UED. These platforms include Facebook, TikTok, Zalo, Messenger, Instagram, YouTube, and X (Twitter).

The survey results from Figure 1 show that the most frequently used social media platforms were Messenger (Mean = 4.15) and TikTok (Mean = 4.14). This reflects the current trend of social media use among students, in which Messenger serves as a tool for daily communication and

information exchange, while TikTok is a popular platform for entertainment and short-form video-based information reception. These were followed by Facebook (Mean = 3.98), Zalo (Mean = 3.91), YouTube (Mean = 3.41), Instagram (Mean = 3.12), and X (Twitter), which had the lowest mean score (Mean = 1.61) (Figure 2). Overall, the results reflect a shift from traditional social networks to platforms with short-form content, high interactivity, and the ability to simultaneously meet communication and entertainment needs.

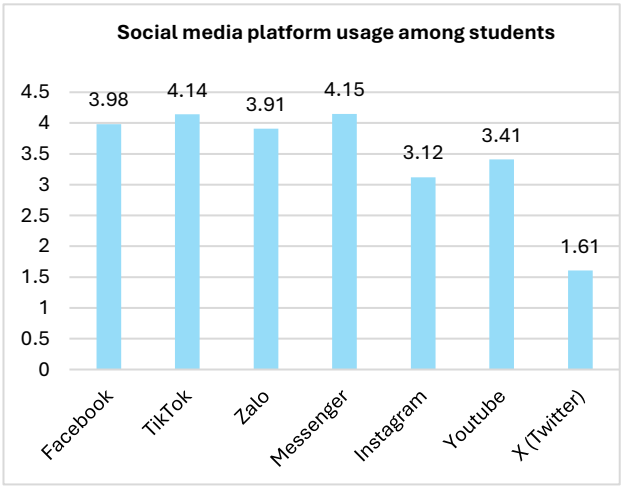


Figure 2. *Social media platform usage levels among students*

4.2.2. Students' duration of social media use

The results from Figure 3 show that nearly half of the surveyed students used social media for more than 5 hours per day (45.6%), nearly one-third used social media for 3–5 hours per day (32.9%), 17.5% used it for 1–3 hours per day, and only 3.9%, equivalent to 9 students, used social media for less than 1 hour per day.

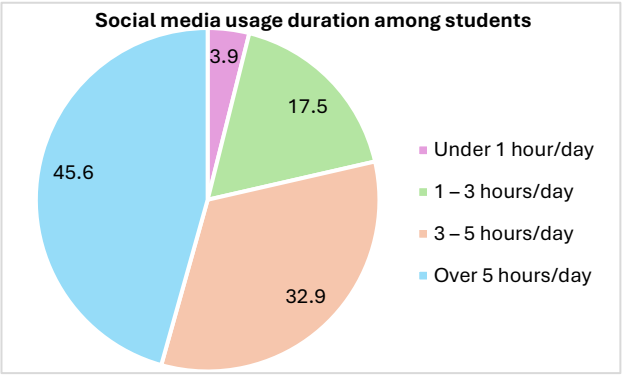


Figure 3. *Social media usage duration among students*

4.2.3. Purposes of social media use

Students' purposes of social media use were reflected through nine statements, ranging from sharing information, maintaining contact, learning, and work to entertainment purposes serving their daily lives. Students' levels of social media use by purpose are presented in the following chart.

The research results in Figure 4 show that most students in the survey sample frequently used social media to stay in touch with friends and family, followed by learning, filling leisure time, and online shopping. These constituted the group of purposes that students commonly pursued when using social media. This is consistent with the student age group, whose primary activities revolve around career-oriented learning and who are in the most active developmental stage of higher-order emotions such as intellect, morality, friendship, and love [23]. A study by Hoang Thi Kim Lien et al. also revealed that 54% of students used social media to update academic information, while 41% used it for entertainment purposes [24]. The least frequently reported purpose was sharing personal life. It can be seen that students still have many concerns about publicly expressing themselves; instead, they tend to maintain privacy in cyberspace.

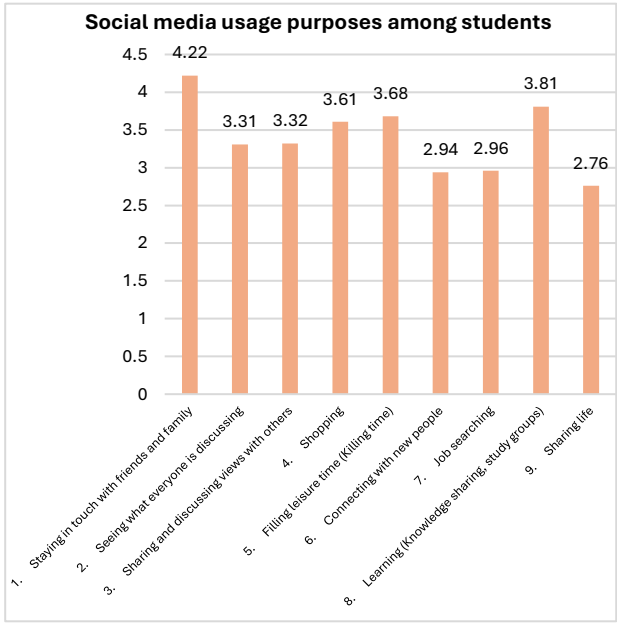


Figure 4. *Social media usage purposes among students*

4.2.4. Social media use behaviors

Table 3. *Social media use behaviors among students*

Use behavior	Mean ($\bar{x}$)	SD
Passive use	3.04	0.76
Active use	2.61	0.84

Overall, students used social media more passively than actively. Passive use was frequently reflected in the following activities: "I view the stories of friends or people I follow" (Mean = 3.53), and "I read the comments under my own photos" (Table 3). This passive behavior also includes scrolling through social media for hours to read news, view preferred content, and see what is happening. Active social media use was mainly reflected in several activities such as "I create highlight sections on my personal profile" (Mean = 3.12), "I post photos/posts" (Mean = 2.88), and "I post photos taken with my family" (Mean = 2.83). These activities are directly related to the lives of social media users.

4.3. Relationship between loneliness and social media use among students at UD-UED

4.3.1. Correlation between loneliness and students' use of social media platforms

Correlation analysis shows that loneliness was correlated with the use of certain social media platforms.

Specifically, loneliness had a weak negative correlation with the level of use of Zalo (r = -0.16, p = 0.01) and Messenger (r = -0.26, p = 0.00). This result indicates that, among some students, higher levels of Zalo and Messenger use tended to be associated with lower levels of loneliness.

Table 4. *Relationship between loneliness and students' levels of social media platform use*

Platform used	Loneliness	
	Correlation coefficient (r)	p-value
Facebook	-0.08	0.22
TikTok	-0.08	0.22
Zalo	-0.16*	**0.01**
Messenger	-0.26**	**0.00**
Instagram	-0.04	0.49
Youtube	-0.12	0.05
X (Twitter)	0.24**	**0.00**

The results from the table also show that loneliness had a weak positive correlation with the level of use of X (Twitter) (r = 0.24, p = 0.00) (Table 4). This means that, among some students, higher levels of Twitter use tended to be associated with higher levels of loneliness. This result contrasts with those for Zalo and Messenger. While Zalo and Messenger are platforms that support the maintenance of existing relationships and are associated with lower levels of loneliness, X (Twitter) tends to focus more on information reception and interaction with broader communities.

4.3.2. Correlation between loneliness and students' purposes of social media use

The correlation analysis results show that there was a relationship between loneliness and students' purposes of social media use. Specifically, there was a moderate negative correlation between loneliness and the purpose of "staying in touch with friends and family" when students used social media (r = -0.41**, p = 0.00) (Table 5). This indicates that students who tended to use social media to maintain connections with family and friends generally exhibited lower levels of loneliness. This result is consistent with the correlations between loneliness and the levels of use of Zalo and Messenger discussed above.

Table 5. *Relationship between loneliness and students' purposes of social media use*

Purpose of use	Loneliness	
	Correlation coefficient (r)	p-value
Staying in touch with friends and family	-0,41**	**0,00**
Seeing what everyone is discussing	-0,06	0,33
Sharing and discussing views with others	-0,28**	**0,00**
Shopping	-0,13	**0,05**
Filling leisure time	-0,02	0,67
Connecting with new people	-0,13*	**0,04**
Job searching	0,07	0,23
Learning	-0,17**	**0,01**
Sharing life	-0,13*	**0,04**

In addition, other purposes involving interaction and connection also showed statistically significant negative correlations with loneliness. Specifically, the purpose of "sharing and discussing views" had a weak negative correlation with loneliness (r = -0.28**, p = 0.00). Similarly, activities for the purposes of "learning" (r = -0.17**, p = 0.01), "connecting with new people" (r = -0.13*, p = 0.04), "sharing personal life" (r = -0.13*, p = 0.04), and "online shopping" (r = -0.13, p = 0.05) were all negatively correlated with loneliness, although the correlations remained weak. These results partly reinforce the argument regarding the role of purposeful and active social media use. Accordingly, students who actively utilize digital platforms to seek knowledge, expand their communication networks, or express themselves tend to experience lower levels of loneliness than their counterparts.

No relationship was found between loneliness and students' duration of use, motivation for use, or social media use behaviors in the research sample.

4.3.3. Predictive role of social media use factors in students' loneliness

The levels of use of Zalo, Messenger, and X, along with several purposes of use, were examined to determine their ability to predict students' levels of loneliness. The regression analysis results are presented in the table below.

The results show that purposes of use such as "staying in touch with friends and family" (Beta = -0.29, p = 0.00), "sharing and discussing views with others" (Beta = -0.19, p = 0.007), and the level of use of X (Twitter) (Beta = 0.17, p = 0.01) were able to predict perceived loneliness among students at UD-UED (Table 6).

Table 6. *Predictors of loneliness among students*

Social media use factors	Unstandardized coefficients		Standardized coefficients	P – value	VIF
	B	Standard Error (SE)	Beta		
Platforms used					
Zalo	-0.02	0.73	-0.002	0.97	1.30
Messenger	-1.31	0.75	-0.11	0.08	1.31
X (Twitter)	1.76	0.63	0.17	**0.00**	1.13
Purposes of use					
Staying in touch with friends and family	-3.8	0.82	-0.29	**0.00**	1.23
Sharing and discussing views with others	-1.89	0.69	-0.19	**0.01**	1.44
Shopping	0.54	0.69	0.05	0.43	1.24
Connecting with new people	0.1	0.64	0.01	0.87	1.38
Learning	-0.51	0.69	-0.04	0.47	1.2
Sharing life	-0.46	0.6	-0.05	0.44	1.25

Regarding the direction of the effects, the level of use of X (Twitter) had a positive predictive relationship with loneliness (B = 1.76). Accordingly, when other factors remained unchanged, if the level of X use increased by one unit, students' loneliness scores tended to increase by an average of 1.76 units. Conversely, the model recorded a negative predictive trend for two behaviors: using social media to "staying in touch with friends and family" (B = -3.80) and to "sharing and discussing views with others" (B = -1.89).

With an adjusted R^2 value of 0.225, the model explained approximately 22.5% of the variance in

loneliness. Although this figure is not particularly high, because human beings are culturally and socially characterized organisms who are influenced by many different mediating variables, the model's predictive level of 22.5% still holds important scientific significance.

5. Conclusion

The majority of students at UD-UED experienced a high level of loneliness. They frequently felt that no one truly understood them, that they lacked companions, and that they felt embarrassed and shy.

Students used Messenger the most, for purposes such as staying in touch with friends and family, learning, filling leisure time, and online shopping. Most students used social media for more than 3 hours per day and used it passively.

Loneliness had a weak negative correlation with the level of use of Zalo and Messenger. In contrast, loneliness had a weak positive correlation with the level of use of X (Twitter). In addition, loneliness was also negatively correlated with purposes of social media use related to connection, staying in touch, and maintaining students' relationships.

Based on the above findings, the study proposes several recommendations to reduce loneliness among students and promote more appropriate social media use. The university should focus on developing mental health care programs and providing guidance on healthy social media use skills. At the same time, students should actively shift from passive interaction to purposeful social media use in order to strengthen real-life connections and maintain contact with family and friends.

This study still has limitations regarding the sample size and the use of a self-designed measurement instrument that has not undergone an extensive standardization process. Therefore, the representativeness of the sample and the rigor of the measurement instrument remain subject to certain limitations. In the future, we aim to conduct longitudinal studies or in-depth qualitative studies to help clarify the causal direction between loneliness and social media use behaviors.

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