



HIKIKOMORI TENDENCIES AMONG UNIVERSITY STUDENTS: SOCIALIZATION, ISOLATION AND EMOTIONAL SUPPORT

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Abstract:

The university years constitute a critical period in the transition to adulthood for building social relationships, developing a sense of belonging, and consolidating psychosocial well-being. During this period, fluctuations in socialization, tendencies toward isolation, and insufficient perceptions of emotional support can adversely affect students' academic functioning and psychological well-being, potentially increasing tendencies toward social isolation and loneliness among young adults and university students. This study aims to examine university students' socialization levels, isolation tendencies, and perceived emotional support, and to determine how these behaviors relate to demographic factors. This study adopted a quantitative research approach and employed a descriptive survey design. The sample consisted of 406 university students selected through simple random sampling. Data were collected using the Hikikomori Questionnaire (HQ-25), which includes three subdimensions: Socialization, Isolation, and Emotional Support. Descriptive statistics, independent samples t-tests, and one-way ANOVA were used to analyse the data across gender, academic department, and daily social media use categories. Result indicated that responses clustered at the "undecided" level on the Hikikomori total score and across its three subdimensions (Socialization, Isolation, Emotional Support). By gender, a significant difference was observed on the Isolation subdimension; in this subdimension, female students had higher mean scores than males. No significant differences were found by academic department on the Hikikomori total or its subdimensions, and no significant differences were observed across daily social media use groups (2–4 hours, 4–6 hours, 6–8 hours, ≥8 hours) as well. In conclusion, the moderate level of social isolation observed among students indicates the influence of individual and psychosocial factors on their sense of social connectedness and perceived emotional support. This finding highlights the necessity of implementing preventive programs within university settings aimed at strengthening social interaction and enhancing psychological resilience.

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1. Introduction

Given the accelerating pace of digitalization today, individuals' modes of social interaction have undergone substantial change. Owing to the new affordances of advanced technologies, traditional face-to-face communication is increasingly being supplanted by interactions in virtual environments (Chen, Toyama, & Yamada, 2024). This shift may heighten tendencies toward social isolation and loneliness, particularly among young adults and university students (Diehl, Jansen, Ishchanova, & Hilger-Kolb, 2018). Social isolation refers to a condition in which individuals withdraw from social networks and interactions, experience a weakening of social ties, and face a reduction in sources of social support. Unlike loneliness—which is subjective—social isolation is an objective phenomenon concerned with the insufficiency of one's social relationships (Cornwell & Waite, 2009; Holt-Lunstad *et al.*, 2015; Nicholson, 2009). The literature indicates that a range of factors influence feelings of social isolation and loneliness among young adults. For example, although the growing prevalence of social media use can strengthen social bonds, over time, social media-based interactions may also lead individuals to feel lonelier (Keles, McCrae, & Grealish, 2020; Primack *et al.*, 2017). Kirwan *et al.* (2024) emphasize that loneliness in adulthood is a rapidly growing area of research.

University students constitute one of the groups at risk for social isolation due to academic stress, social transitions, and processes of individualization (Arnett, 2000; Barbayannis *et al.*, 2022; Diehl *et al.*, 2018; Ellard, Dennison, & Tuomainen, 2023). Research indicates that feelings of loneliness are high among university students and may negatively affect both their academic lives and psychological well-being (Arslan & Yıldırım, 2021; Cacioppo & Cacioppo, 2018; Diehl, Jansen, & Ishchanova, 2018; Matthews *et al.*, 2019; Richardson, Elliott, & Roberts, 2017). The university period is critically important as it is a time when individuals are expected to build social ties and develop social life skills (Arnett, 2000; Astin, 1984; Tinto, 1993). However, increases in social isolation and loneliness during this period pose a significant problem both individually and socially (Cacioppo & Cacioppo, 2018; Diehl *et al.*, 2018; Holt-Lunstad *et al.*, 2015; Matthews *et al.*, 2019). Social isolation refers to the withdrawal from social interactions and a reduction in connections with one's social environment (Cornwell & Waite, 2009; Holt-Lunstad *et al.*, 2015; Nicholson, 2009).

Cacioppo and Hawkley (2009) noted that, if left unaddressed, social isolation can lead to serious psychological problems and adversely affect individuals' cognitive functioning. University students, who are simultaneously under pressure to adapt to a new social environment and to focus on academic success, stand out as a group in which social isolation becomes particularly salient (Bevens *et al.*, 2024; Córdova Olivera *et al.*, 2023; Ellard, Dennison, & Tuomainen, 2023; Gopalan, Linden-Carmichael, & Lanza, 2022; Mizani *et al.*, 2022). Moreover, during the transition from adolescence to early adulthood, individuals' capacity to conform to social norms is closely linked to multidimensional

factors such as academic achievement and participation in the social milieu (Rubin, Coplan, & Bowker, 2009). In this period, increases in experiences of loneliness and social isolation may undermine social adjustment and shape future social roles (Arnett, 2000; Bryan *et al.*, 2024; Hawkley & Cacioppo, 2010; Holt-Lunstad *et al.*, 2015; Mund & Johnson, 2021). Empirical work has produced extensive evidence regarding the levels of social isolation and loneliness among university students. For instance, Zahedi *et al.* (2022) showed that first-year students who relocate from outside the city to attend university tend to exhibit weakened social ties and, consequently, heightened tendencies toward social isolation.

Similarly, the inadequacy of social support networks and activities within university settings can heighten students' levels of loneliness and isolation (Aydiner-Boylu, Günay, & Ersoy, 2019; Yılmaz, Yılmaz, & Karaca, 2008). Rhodes, Sniatecki, Rocco, and Todd (2015) further emphasized that, among university students in the United States, social media use does not reduce social isolation; on the contrary, it diminishes the quality of social interaction. In their study, Yılmaz, Yılmaz, and Karaca (2008) also reported that low perceived social support contributes to increased feelings of loneliness. Prior research has shown that social isolation adversely affects individuals' mental health, lowers learning motivation, and undermines academic performance (Bek, 2017; Cacioppo & Hawkley, 2009; Hawkley & Cacioppo, 2010). Because university students face numerous challenges—adapting to a new social environment, assuming individual responsibilities, and coping with uncertainties about the future—social isolation and loneliness may become more pronounced in this group (Arnett, 2000; Credé & Niehorster, 2012; Diehl *et al.*, 2018; Friedlander *et al.*, 2007; Gopalan *et al.*, 2022; Vasileiou *et al.*, 2019). Such patterns of social isolation and loneliness can affect individuals' capacity to conform to social norms, their within-group cooperation, and, in the long run, their professional performance (Baumeister *et al.*, 2005; Özçelik & Barsade, 2018; Twenge *et al.*, 2007; Williams & Nida, 2011). Therefore, understanding social isolation during the university years is essential to enabling individuals to fulfill their future social and professional roles more effectively.

Studies on social isolation and loneliness in Japan have concentrated particularly on the concept of “hikikomori” (Kato, 2024; Saitō, 2013; Tajan, 2015; Teo, 2010;). Hikikomori—denoting a near-complete withdrawal from social life—is regarded in Japan as both a sociological and psychological problem (Kato, 2024; Kato, Kanba, & Teo, 2020; Lin *et al.*, 2022). Saito (1998) argued that hikikomori in young people is associated with social pressure, anxiety about academic achievement, and problems rooted in family structure. According to Saito (1998), this behavior is observed especially among individuals who struggle to adapt to Japanese social norms and roles. Another study by Teo and Gaw (2010) focused on the psychosocial status of individuals with hikikomori, conceptualizing it as a culturally sensitive social withdrawal syndrome and discussing comorbidities, particularly depression and anxiety. In Japan, the effects of social media and digital communication on loneliness and isolation are context-dependent: in some cases, remote communication (especially via phone calls and text messaging) may reduce

loneliness; however, increased digital use can shorten time spent in face-to-face interaction and thereby indirectly heighten loneliness, indicating that digital contact cannot fully substitute for in-person relationships (Arakawa *et al.*, 2023; Chen, Toyama, & Yamada, 2024; Nowland, Necka, & Cacioppo, 2018).

The university years constitute a critical period in the transition to adulthood for building social relationships, developing a sense of belonging, and consolidating psychosocial well-being. Nevertheless, fluctuations in socialization, tendencies toward isolation, and insufficient perceptions of emotional support during this period can adversely affect students' academic functioning and psychological well-being. Although the existing literature underscores the importance of these three domains, findings remain inconsistent regarding how specific demographic characteristics (gender, age, department) and daily social media use relate to these indicators, pointing to a need for context-sensitive new evidence. The results to be obtained may contribute, on the one hand, to the early identification of at-risk student groups and the development of targeted support programs, and, on the other, to shaping policies and practices that strengthen campus-level social participation and support networks. Accordingly, this study aims to provide a holistic profile of university students' socialization, isolation, and emotional support, and to examine whether these profiles differ significantly by gender, age, department, and daily social media use. In line with this overarching aim, the study addresses the following research questions:

- 1) What are the overall patterns in university students' socialization levels, tendencies toward isolation, and perceptions of emotional support?
- 2) Do university students' socialization levels, isolation tendencies, and perceived emotional support differ significantly by gender, academic department, and daily social media use duration?

2. Material and Methods

This study was designed using a quantitative approach to examine university students' socialization levels, tendencies toward isolation, and perceptions of emotional support, and to determine how these behaviors relate to demographic factors. A quantitative methodology is appropriate for investigating measurable aspects of social behavior and for yielding generalizable findings (Creswell, 2014). The research employed a descriptive survey design, which is used to depict the status of a group or population at a particular point in time (Fraenkel, Wallen, & Hyun, 2012). This design aims to delineate the existing situation concerning the research topic through a detailed examination (Karasar, 2009) and is frequently preferred in the social sciences to analyze current social behaviors. In this study, university students' socialization levels, tendencies toward isolation, and perceptions of emotional support will be analyzed.

2.1 Population and Sample

The study was conducted with 406 undergraduate students enrolled at a public university to examine university students' socialization levels, tendencies toward isolation, and perceptions of emotional support, and to determine how these behaviors relate to demographic factors. Participants were selected using simple random sampling, in which every member of the population has an equal chance of selection (Creswell, 2014). In this research, eight departments were randomly included—Geography, Child Development, English Language and Literature, Psychology, Sociology, History, Turkish Language and Literature, and Nursing—and 406 students from these departments were recruited. Mahalanobis distances were computed for the completed questionnaires; five were identified as invalid and excluded from analysis, yielding a final analytic sample of $n = 401$.

Examining the demographic distribution of participants, women were more highly represented than men (78.3% vs. 21.7%). By academic department, the greatest participation came from Child Development (25.2%), followed by English Language and Literature (24.4%) and Turkish Language and Literature (14.7%). The remaining departments were Geography (8.5%), Nursing (9.2%), Psychology (6.0%), Sociology (6.0%), and History (6.0%).

2.2 Data Collection Instruments

The study employed a Demographic Information Form and the Hikikomori Questionnaire (HQ-25) to collect data.

2.2.1 Hikikomori Questionnaire (HQ-25)

Developed by Teo *et al.* (2018), the Hikikomori Questionnaire (HQ-25) is designed to assess individuals' tendencies toward social isolation and is answered on a five-point Likert scale. Turkish adaptations were conducted by Gündoğmuş *et al.* (2021), Kaya *et al.* (2023), and İliç (2023). The scale comprises 25 items and three factors/subscales: Socialization (11 items), Isolation (8 items), and Emotional Support (6 items). Regarding internal consistency, the overall Cronbach's alpha was .867. Subscale reliability coefficients were .770 for Socialization, .754 for Isolation, and .695 for Emotional Support. These values indicate that the scale possesses generally adequate internal consistency. To evaluate students' hikikomori tendencies, responses to the items on the five-point scale were interpreted using the following categories: Strongly Disagree (1.00–1.80), Disagree (1.81–2.60), Undecided (2.61–3.40), Agree (3.41–4.20), and Strongly Agree (4.21–5.00).

To evaluate the suitability of the data for factor analysis, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were conducted. The results indicate that the scale is appropriate for factor analysis and that construct validity is supported (Table 1).

Table 1: KMO and Bartlett's Test Results for the Scale Used in the Study

Scale	Kaiser-Meyer-Olkin (KMO)	Bartlett's Test of Sphericity	sig.
Hikikomori Scale (HQ-25)	.891	2029.760	<.001*

* $p < .05$

According to Table 1, the KMO value for the Hikikomori Scale was found to be .891. Considering that KMO values between 0.50 and 1.00 are deemed acceptable (Altunışık *et al.*, 2010, p. 266), the data structure was judged sufficient to perform factor analysis. Examination of Bartlett's test results showed that the obtained chi-square value was significant at the .01 level for both scales (sig. = .000), and this result was taken to indicate that the data come from a multivariate normal distribution and are therefore suitable for factor analysis (Çokluk, Şekercioğlu, & Büyüköztürk, 2010). Additionally, the normality values for the Hikikomori Scale used in the study are presented in Table 2.

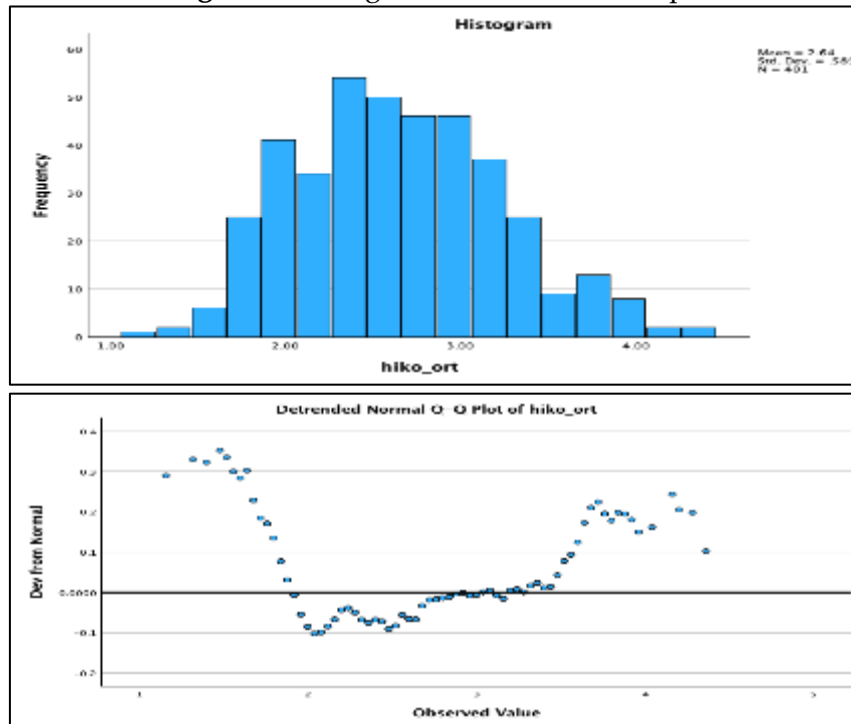
Table 2: Normality Values for the Hikikomori Scale

Statistic	Value
Z value (Skewness)	0.305
Z value (Kurtosis)	-0.258
Kolmogorov-Smirnov (K-S) Test	.054
p-value	.007*

* $p < .05$

According to Table 2, normality for the Hikikomori scale was evaluated using skewness, kurtosis, and the Kolmogorov–Smirnov (K–S) test. As noted by Kalaycı (2014), in normality testing, the skewness and kurtosis coefficients are standardized by dividing by their standard errors, and the resulting z values are compared with critical values. For skewness and kurtosis, values falling within ± 1.96 at the .05 significance level are typically taken as consistent with normality, with values closer to zero indicating better fit. In the present data, skewness was 0.305 and kurtosis was -0.258 ; because these fall within the -1 to $+1$ range, the distribution can be considered approximately normal. To further assess whether test-score distributions follow a normal form, the Kolmogorov–Smirnov test was conducted. The K–S result was $p = .007$, leading to rejection of the strict normality assumption. Normality was also examined visually using the histogram and Q–Q plot; these graphics are presented below.

Figure 1: Histogram and Q-Q Plot Graph



Because the data points align along a straight line, normality can be assumed. However, since the K-S test may flag even minor deviations as significant in large samples ($n > 300$), normality was evaluated with reference to the histogram, Q-Q plot, and skewness-kurtosis indices as well. Overall, the histogram suggests a distribution close to normal. Although there is a slight right skew, the normality assumption appears adequate for the use of parametric tests. In sum, while the distribution does not meet strict normality in every respect, it satisfies the assumption to a sufficient degree. On this basis, parametric tests were deemed appropriate for the analyses. The CFA results for the scale used in the study are presented in Table 3.

Table 3: CFA Results for the Scale Used in the Study

Fit Index	Hikikomori CFA	Good Fit Criteria	Acceptable Fit Criteria
χ^2/SD	2.73	≤ 3	$\leq 4-5$
AGFI	0.85	≥ 0.90	0.89-0.85
GFI	0.87	≥ 0.90	0.89-0.85
NFI	0.91	≥ 0.95	0.94-0.90
CFI	0.94	≥ 0.97	≤ 0.95
RMSEA	0.06	≤ 0.05	0.06-0.08
SRMR	0.06	≤ 0.05	0.06-0.08

To verify the three-factor structure of the Hikikomori Scale, a CFA was conducted. The chi-square statistic was significant ($\chi^2 = 745.08$, $df = 272$, $p < .001$). Fit indices were RMSEA = .06, CFI = .94, GFI = .87, AGFI = .85, SRMR = .06, and NFI = .91. Based on these values,

the χ^2/df ratio indicates good fit, and the remaining indices fall within commonly accepted thresholds for acceptable model fit.

2.3. Data Collection Procedure

Prior to data collection, ethical approval was obtained from the Ethics Committee of the university where the researchers are employed. Following approval, the researchers contacted instructors teaching in various faculties at the same university, informed them about the study, and identified suitable class sessions and dates for administration. At the scheduled times, the researchers visited the designated classes and distributed the instrument electronically via Microsoft Forms. Administration was conducted class by class. Students were briefed about the study (purpose, informed consent, confidentiality, voluntariness) and invited to participate. No personally identifying information was requested. Data were collected during the Spring semester of the 2024–2025 academic year. Each administration took approximately 15 minutes.

2.4. Data Analysis

The data were analyzed using SPSS 29. First, erroneous entries and outliers were removed to prepare the dataset for analysis. Normality tests were then conducted to determine whether subsequent analyses should be parametric or nonparametric. Confirmatory factor analysis (CFA) of the scale was performed in LISREL 8.8, and model fit indices were evaluated. Descriptive statistics (frequency, percentage, mean, standard deviation) were computed. To examine relationships between the overall scale and its subscales and the demographic variables, parametric tests (independent-samples t test, one-way ANOVA) were applied; when the normality assumption was not met, nonparametric tests (Kruskal–Wallis H, Mann–Whitney U) were used. Statistical significance was evaluated at $p \leq .05$ and $p \leq .01$.

3. Results

This study examined university students' socialization levels, tendencies toward isolation, and perceptions of emotional support. Differences were evaluated by gender, academic department, and daily social media use. First, overall tendencies toward loneliness and the subdimensions were described; subsequently, differences were tested with respect to gender, department, and social media duration. Descriptive analyses for the total scale and its subscales are presented in Table 4.

Table 4: Descriptive Analyses for the Overall Scale and Its Subdimensions

	<i>N</i>	Min.	Max.	$\bar{X}$	<i>SD</i>
Hikikomori	401	1.16	4.36	2.64	0.589
Socialization	401	1.00	4.64	2.58	0.711
Isolation	401	1.50	4.75	2.84	0.661
Emotional Support	401	1.00	5.00	2.50	0.827

Examining mean scores on the Hikikomori scale and its subdimensions—Socialization, Isolation, and Emotional Support—reveals that the total scale ($\bar{x} = 2.64$, $SD = 0.589$) falls at the “undecided” level overall. The minimum and maximum scores (1.16–4.36) indicate notable individual differences. This suggests that while some students exhibit hikikomori characteristics, the majority show a moderate tendency. The Socialization subscale ($\bar{x} = 2.58$, $SD = 0.711$) indicates that, overall, students disagreed with statements regarding socializing. The observed range (1.00–4.64) implies that some students are open to social engagement, whereas others are more reticent. The Isolation subscale ($\bar{x} = 2.84$, $SD = 0.661$) is higher than the other subdimensions and likewise reflects an “undecided” tendency. This indicates that withdrawal from social interaction is somewhat more pronounced than socialization levels. The spread from 1.50 to 4.75 again points to individual variability. The Emotional Support subscale ($\bar{x} = 2.50$, $SD = 0.827$) indicates that students disagreed regarding receiving emotional support from their surroundings. Descriptive analyses for the other subdimension, Socialization, are presented in Table 5.

Table 5: Descriptive Statistics for the Socialization Subscale

Socialization Subscale Items	Findings		
	N	$\bar{X}$	SD
1. I keep my distance from other people.	401	3.00	1.248
2. I like meeting new people.	401	2.32	1.187
3. People bother me.	401	2.82	1.293
4. I feel uncomfortable around others.	401	2.66	1.287
5. I do not like being seen by others.	401	2.37	1.339
6. It is difficult for me to join groups.	401	2.43	1.382
7. I enjoy being in social settings.	401	2.16	1.214
8. I avoid talking with others.	401	2.22	1.250
9. I prefer being alone rather than being with others.	401	3.17	1.398
10. I definitely prefer being around others.	401	2.72	1.219
11. I do not enjoy social interactions.	401	2.53	1.259

Examining responses on the Socialization subscale shows that the item “I prefer being alone rather than being with others” ($\bar{x} = 3.17$, $SD = 1.398$) indicates an overall “undecided” stance toward solitude. Similarly, responses to “I keep my distance from other people” ($\bar{x} = 3.00$, $SD = 1.248$) also cluster around the undecided level. These results suggest that students may prefer solitude in certain situations but are not completely disengaged from their social environment. By contrast, mean scores for “I enjoy being in social settings” ($\bar{x} = 2.16$, $SD = 1.214$) and “I like meeting new people” ($\bar{x} = 2.32$, $SD = 1.187$) indicate disagreement, implying reluctance and reticence toward entering new social environments and meeting others. Meanwhile, responses to “I definitely prefer being around others” ($\bar{x} = 2.72$, $SD = 1.219$) and “I do not enjoy social interactions” ($\bar{x} = 2.53$, $SD = 1.259$) range from undecided to slight agreement/disagreement. Overall, students appear to endorse some forms of social interaction but do not display a strong, consistent propensity to socialize. Descriptive analyses for the Isolation subscale are presented in Table 6.

Table 6: Descriptive Statistics for the Isolation Subscale

Isolation Subscale Items	Findings		
	N	$\bar{X}$	SD
1. I spend most of my time at home.	401	3.10	1.364
2. I shut myself in my room.	401	2.30	1.368
3. I spend most of my time alone.	401	2.78	1.402
4. I rarely meet people in person.	401	2.81	1.327
5. I do not live according to society's rules and values.	401	2.65	1.343
6. I have very little contact with others (e.g., talking, writing, etc.).	401	3.20	1.322
7. I rarely spend time alone.	401	3.11	1.299
8. I devote very little time to interacting with other people.	401	2.77	1.247

Examining responses on the Isolation subscale shows that for “I spend most of my time at home” ($\bar{x} = 3.10$, $SD = 1.364$), students, on average, were undecided, suggesting that while they do spend time at home to some extent, this is not necessarily a pervasive indicator of isolation. Similarly, responses to “I rarely spend time alone” ($\bar{x} = 3.11$, $SD = 1.299$) reflect ambivalence about solitary time. The mean for “I have very little contact with others (e.g., talking, texting)” ($\bar{x} = 3.20$, $SD = 1.322$) also falls at the undecided level, pointing to potentially limited social interaction. Responses to “I devote very little time to interacting with other people” ($\bar{x} = 2.77$, $SD = 1.247$) and “I spend most of my time alone” ($\bar{x} = 2.78$, $SD = 1.402$) likewise indicate undecided positions. By contrast, “I shut myself in my room” ($\bar{x} = 2.30$, $SD = 1.368$) elicited disagreement on average. Finally, responses to “I do not live according to society's rules and values” ($\bar{x} = 2.65$, $SD = 1.343$) indicate ambivalence. Descriptive analyses for the Emotional Support subscale are presented in Table 7.

Table 7: Descriptive Statistics for the Emotional Support Subscale

Emotional Support Subscale Items	Findings		
	N	$\bar{X}$	SD
1. I have no one with whom I can discuss truly important matters.	401	2.64	1.388
2. There are people in my life who try to understand me.	401	2.22	1.237
3. I can share my personal thoughts with more than one person.	401	2.65	1.363
4. I have very few people with whom I can discuss important matters.	401	3.41	1.330
5. There is no one truly important in my life.	401	2.00	1.289
6. There is someone I can trust with my problems.	401	2.08	1.305

Examining students' responses regarding perceived emotional support shows that for the item “I have very few people with whom I can discuss important matters” ($\bar{x} = 3.41$, $SD = 1.330$), the average response was at the “agree” level. This suggests that many students believe they have a limited social support network. By contrast, the mean for “There is no one truly important in my life” ($\bar{x} = 2.00$, $SD = 1.289$) indicates disagreement, implying that most students feel there are important people in their lives. On the other hand, responses to “There is someone I can trust with my problems” ($\bar{x} = 2.08$, $SD = 1.305$) and “There are people in my life who try to understand me” ($\bar{x} = 2.22$, $SD = 1.237$) fell at the “disagree” level, indicating that while students perceive some emotional support, it

is not strong. Responses to “I have no one with whom I can discuss truly important issues” ($\bar{x}$ = 2.64, SD = 1.388) clustered around “undecided,” suggesting that students may have someone to share with on certain topics but do not feel they have a sufficiently broad support network. A similar pattern appears for “I can share my personal thoughts with more than one person” ($\bar{x}$ = 2.65, SD = 1.363), where responses also centered on “undecided.” Independent-samples t-test results for the total scale and subscales by gender are presented in Table 8.

Table 8: Student Responses on the Overall Scale and Subdimensions by Gender

Subscale	Gender	N	$\bar{X}$	SD	sd	Levene	sig.	t	sig.
Hikikomori	Female	314	2.67	0.579	399	.072	.789	2.029	.022
	Male	87	2.53	0.614				1.963	
Socialization	Female	314	2.61	0.707	399	.406	.525	1.830	.034
	Male	87	2.45	0.716				1.816	
Isolation	Female	314	2.90	0.647	399	.001	.980	3.645	<.001
	Male	87	2.61	0.666				3.585	
Emotional Support	Female	314	2.48	0.839	399	.832	.362	-0.707	.240
	Male	87	2.55	0.785				-0.734	

$p < .05^*$

According to Table 8, female students ($\bar{x}$ = 2.67, SD = .579) scored higher on the total scale than male students ($\bar{x}$ = 2.53, SD = .614), $t(399) = 2.029$, $p = .022$. While females reported means at the “undecided” level, males were at the “disagree” level. This suggests that female students may exhibit stronger tendencies toward hikikomori-type behaviors, whereas males show lower levels. On the Socialization subscale, females ($\bar{x}$ = 2.61, SD = .707) again scored higher than males ($\bar{x}$ = 2.45, SD = .716), $t(399) = 1.830$, $p = .034$. Female responses clustered around “undecided,” whereas male responses were closer to “disagree,” implying that women appear more willing to socialize than men, who seem more reticent. For the Isolation subscale, females ($\bar{x}$ = 2.90, SD = .647) scored significantly higher than males ($\bar{x}$ = 2.61, SD = .666), $t(399) = 3.645$, $p < .001$. Both groups, however, fell within the “undecided” range. This indicates a greater inclination among female students to spend time alone and to create solitary spaces. On the Emotional Support subscale, females ($\bar{x}$ = 2.48, SD = .839) scored slightly lower than males ($\bar{x}$ = 2.55, SD = .785), but the difference was not statistically significant, $t(399) = -.707$, $p = .240$. Both groups were at the “disagree” level, suggesting no notable gender-based differences in perceived emotional support. ANOVA results for the total scale and subscales by academic department are presented in Table 9.

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Table 9: Student Responses on the Overall Scale and Subdimensions by Academic Department

Subscale	Department	N	$\bar{X}$	SD	Source	Sum of Squares	sd	Mean Square	F	p	Scheffe
Hikikomori	Geography	34	2.66	.612	Between G.	.142	7	.020	.057	1.000	-
	Child Development	101	2.62	.610	Within G.	138.789	393	.353			
	English Language & Lit.	98	2.65	.667	Total	138.931	400				
	Psychology	24	2.64	.474							
	Sociology	24	2.60	.441							
	History	24	2.67	.649							
	Turkish Language & Lit.	59	2.64	.455							
	Nursing	37	2.65	.633							
	Levene: 2.394 p=.021*										
Socialization	Geography	34	2.59	.752	Between G.	.816	7	.117	.227	.979	-
	Child Development	101	2.55	.697	Within G.	201.641	393	.513			
	English Language & Lit.	98	2.63	.818	Total	202.457	400				
	Psychology	24	2.65	.586							
	Sociology	24	2.50	.600							
	History	24	2.51	.712							
	Turkish Language & Lit.	59	2.56	.624							
	Nursing	37	2.57	.722							
	Levene: 2.069 p=.046*										
Isolation	Geography	34	2.80	.727	Between G.	.320	7	.046	.103	.998	-
	Child Development	101	2.85	.631	Within G.	174.966	393	.445			
	English Language & Lit.	98	2.83	.667	Total	175.286	400				
	Psychology	24	2.79	.619							
	Sociology	24	2.90	.521							
	History	24	2.78	.844							
	Turkish Language & Lit.	59	2.86	.596							
	Nursing	37	2.84	.786							
	Levene: 1.483 p=.172										
Emotional Support	Geography	34	2.62	.659	Between G.	4.006	7	.572	.832	.561	-
	Child Development	101	2.45	.915	Within G.	270.216	393	.688			

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HIKIKOMORI TENDENCIES AMONG UNIVERSITY STUDENTS:
SOCIALIZATION, ISOLATION, AND EMOTIONAL SUPPORT

	English Language & Lit.	98	2.44	.928	Total	274.222	400			
	Psychology	24	2.41	.795						
	Sociology	24	2.39	.749						
	History	24	2.81	.838						
	Turkish Language & Lit.	59	2.51	.650						
	Nursing	37	2.55	.749						
	Levene: 3.067 p=.004*									

$p < .05$

When differences on the total scale and subscales were examined by academic department, Levene's tests indicated that homogeneity of variance was violated for Hikikomori ($p = .021$), Socialization ($p = .046$), and Emotional Support ($p = .004$); therefore, the Kruskal–Wallis H (KWH) test was deemed more appropriate for these dimensions. For the Isolation subscale ($p = .172$), variance homogeneity held, and ANOVA was used. For the Hikikomori total, departmental means showed the highest averages in History ($\bar{x} = 2.67$, $SD = .649$) and Geography ($\bar{x} = 2.66$, $SD = .612$), with other departments exhibiting very similar means; nonetheless, the between-group difference was not statistically significant ($p = 1.000$). On the Socialization subscale, Psychology students had the highest mean ($\bar{x} = 2.65$, $SD = .586$), while History students had the lowest ($\bar{x} = 2.51$, $SD = .712$); again, no significant difference emerged ($p = .979$). However, because Levene's test was significant for this subscale ($p = .046$), the Kruskal–Wallis test is required. For Isolation, no significant differences were found across departments ($p = .998$). The highest means were observed in Sociology ($\bar{x} = 2.90$, $SD = .521$), Turkish Language and Literature ($\bar{x} = 2.86$, $SD = .596$), and Child Development ($\bar{x} = 2.85$, $SD = .631$), with the lowest in History ($M = 2.78$, $SD = .844$). On Emotional Support, History students reported the highest mean ($M = 2.81$, $SD = .838$) and Psychology students the lowest ($\bar{x} = 2.41$, $SD = .795$). Overall, students indicated similar levels of perceived emotional support across departments ($p = .561$). Given the significant Levene result for this subscale ($p = .004$), the Kruskal–Wallis test is likewise required here. KWH test results by department for the Hikikomori total are presented in Table 10.

Table 10: Kruskal-Wallis H Test Results for the
Hikikomori Subdimension by Academic Department

Department	N	Mean Rank	sd	KWH	p	Sig. Difference
Geography	34	190.12	7	1.984	.961	-
Child Development	101	176.98				
English Language & Lit.	98	242.00				
Psychology	24	180.03				
Sociology	24	174.28				
History	24	184.33				
Turkish Language & Lit.	59	175.65				
Nursing	37	183.38				

To compare students' hikikomori tendencies by academic department, the Kruskal-Wallis H (KWH) test was applied. Examination of mean rank scores showed the highest mean rank for English Language and Literature students (242.00) and the lowest for Sociology students (174.28), with other departments falling in the middle. This pattern suggests relatively higher hikikomori tendencies among English Language and Literature students and lower tendencies among Sociology students. However, the Kruskal-Wallis test yielded $KWH = 1.984$, $p = .961$. Since $p > .05$, there is no statistically significant difference in hikikomori tendencies across departments. In other words, the academic department does not emerge as a determining factor for students' hikikomori tendencies. Although some differences are apparent in mean ranks, they are not statistically significant; therefore, no post hoc analyses were required. KWH test results for the Socialization subscale by department are presented in Table 11.

Table 11

Table 11: Kruskal-Wallis H Test Results for the
Socialization Subdimension by Academic Department

Department	N	Mean Rank	Sd	KWH	p	Sig. Difference
Geography	34	184.85	7	3.401	.846	-
Child Development	101	176.16				
English Language & Lit.	98	256.25				
Psychology	24	186.74				
Sociology	24	187.35				
History	24	173.50				
Turkish Language & Lit.	59	165.08				
Nursing	37	179.42				

To test whether students' socialization levels differ by academic department, the Kruskal-Wallis H (KWH) test was applied. As shown in Table 11, mean ranks vary across departments; however, this variation is not statistically significant ($KWH = 3.401$, $p = .846$). The highest mean rank was observed in English Language and Literature (256.25), and the lowest in Turkish Language and Literature (165.08). Since $p > .05$, these differences are not statistically significant. Accordingly, students' socialization levels do

not appear to differ meaningfully across departments. KWH test results for Emotional Support by department are presented in Table 12.

Table 12: Kruskal-Wallis H Test Results for the Emotional Support Subdimension by Academic Department

Department	N	Mean Rank	Sd	KWH	p	Sig. Difference
Geography	34	202.26	7	7.639	.365	-
Child Development	101	174.24				
English Language & Lit.	98	190.88				
Psychology	24	173.14				
Sociology	24	156.15				
History	24	180.62				
Turkish Language & Lit.	59	223.58				
Nursing	37	183.94				

To compare students' perceived emotional support across academic departments, the Kruskal–Wallis H (KWH) test was applied. As shown in Table 12, the highest mean rank was observed in Turkish Language and Literature (223.58), while the lowest was in Sociology (156.15). This pattern suggests relatively higher perceived emotional support among Turkish Language and Literature students and lower levels among Sociology students. However, the Kruskal–Wallis result was KWH = 7.639, $p = .365$; since $p > .05$, there is no statistically significant difference among departments in perceived emotional support. This finding indicates that students' perceptions of emotional support are independent of their department and that this variable does not exert a marked effect across departments. ANOVA results for the total scale and subscales by daily social media use are presented in Table 13.

Table 13: ANOVA Test Results for the Overall Scale and Subdimensions Based on Daily Social Media Usage Duration

Subscale	Daily Usage	N	$\bar{X}$	SD	Source	Sum of Squares	sd	Mean Square	F	p	scheffe
Hikikomori	2-4 hours	219	2.62	.604	Between G.	.207	3	.069	.198	.898	-
	4-6 hours	118	2.67	.551	Within G.	138.724	397	.349			
	6-8 hours	40	2.67	.549	Total	138.931	400				
	8 hours or more	24	2.65	.716							
	Levene: 1.211 $p = .305$										
Socialization	2-4 hours	219	2.57	.724	Between G.	.085	3	.028	.056	.983	-
	4-6 hours	118	2.59	.675	Within G.	202.372	397	.510			
	6-8 hours	40	2.55	.621	Total	202.457	400				
	8 hours or more	24	2.61	.918							
	Levene: 2.148 $p = .094$										
Isolation	2-4 hours	219	2.80	.662	Between G.	.658	3	.219	.499	.683	-
	4-6 hours	118	2.86	.679	Within G.	174.627	397	.440			
	6-8 hours	40	2.94	.561	Total	175.286	400				
	8 hours or more	24	2.84	.741							

	Levene: .718 p=.542										
Emotional Support	2-4 hours	219	2.46	.811	Between G.	.663	3	.221	.321	.810	-
	4-6 hours	118	2.55	.826	Within G.	273.559	397	.689			
	6-8 hours	40	2.52	.862	Total	274.222	400				
	8 hours or more	24	2.48	.955							
	Levene: .696 p=.555										

According to Table 13, students' hikikomori levels did not differ by daily social media use, $F(3, 397) = 0.198$, $p = .898$. All groups clustered around the "undecided" range ($\bar{x} \approx 2.62$ – 2.67). The highest means were observed among those using social media 4–6 hours ($\bar{x} = 2.67$, $SD = .551$) and 6–8 hours ($\bar{x} = 2.67$, $SD = .549$), while the lowest was in the 2–4 hour group ($\bar{x} = 2.62$, $SD = .604$). However, these differences were not statistically significant ($p > .05$). Students' socialization levels likewise did not vary significantly by daily social media use, $F(3, 397) = 0.056$, $p = .983$. Mean scores ranged from 2.55 to 2.61, generally indicating an "undecided" stance. The highest mean appeared in the ≥ 8 hours group ($\bar{x} = 2.61$, $SD = .918$), but differences were not significant ($p > .05$). Isolation levels also showed no significant differences across usage durations, $F(3, 39) = 0.499$, $p = .683$. The highest isolation mean was in the 6–8 hour group ($\bar{x} = 2.94$, $SD = .561$) and the lowest in the 2–4 hour group ($\bar{x} = 2.80$, $SD = .662$); again, differences were not significant ($p > .05$). This suggests extended social media use does not exert a marked effect on isolation. Similarly, perceived emotional support did not differ significantly by daily social media use, $F(3, 39) = 0.321$, $p = .810$. The highest mean occurred in the 4–6 hour group ($\bar{x} = 2.55$, $SD = .826$) and the lowest in the 2–4 hour group ($\bar{x} = 2.46$, $SD = .811$). Since $p > .05$, these differences are not statistically significant, indicating that time spent on social media does not notably influence students' perceptions of emotional support.

4. Discussion and Conclusion

This study examined university students' socialization levels, tendencies toward isolation, and perceptions of emotional support, and discussed the findings in comparison with the relevant literature.

Examining mean scores on the Hikikomori scale and its subdimensions—Socialization, Isolation, and Emotional Support—shows that the total scale generally falls at the "undecided" level. The Socialization subscale likewise indicates overall ambivalence about engaging socially. The Isolation subscale, while still within the "undecided" range, has a comparatively higher mean, suggesting that tendencies to withdraw from social interaction are more pronounced than socialization levels. The Emotional Support subscale indicates that students are, on average, uncertain about receiving emotional support from their environment. Overall, the distribution of scores across the Hikikomori scale and its subdimensions suggests that a substantial portion of students display moderate tendencies toward social isolation, yet they are not fully withdrawn. Notably, the Isolation score being higher than the other subdimensions may suggest a tendency among students to disengage from their social environment. The

relatively lower level of Emotional Support can be interpreted as this process unfolding with limited supportive mechanisms. These results are consistent with international findings: among young adults, increases in hikikomori/withdrawal tendencies are associated with higher depression and anxiety scores, whereas greater friend/peer support corresponds to reduced withdrawal (Lin *et al.*, 2022). At the same time, the impact of digital interaction is context-dependent: relationship-supportive remote communication can alleviate loneliness, yet when online engagement reduces time spent face-to-face, it may indirectly exacerbate loneliness (Arakawa *et al.*, 2023; Chen, Toyama, & Yamada, 2024). In sum, the findings indicate that students are hesitant—but not fully withdrawn—in their social interactions; the comparatively higher Isolation score points to a drift from social ties, while the relatively lower Emotional Support score suggests that this trajectory may proceed with insufficient support mechanisms (Diehl *et al.*, 2018; Holt-Lunstad *et al.*, 2015; Teo *et al.*, 2018).

Examining responses on the Socialization subscale shows that the item “I prefer being alone rather than being with others” elicited, on average, an “undecided” stance, indicating ambivalence toward solitude. Similarly, responses to “I keep my distance from other people” clustered around the undecided level. These patterns suggest that students may prefer solitude in certain situations but are not completely disengaged from their social environment. By contrast, mean scores for “I enjoy being in social settings” and “I like meeting new people” indicated disagreement, implying reluctance and reticence toward entering new social contexts and meeting others. Meanwhile, responses to “I definitely prefer being around others” and “I do not enjoy social interactions” ranged between undecided and slight agreement/disagreement. Overall, students appear to favor some forms of social interaction but do not exhibit a strong, consistent propensity to socialize. In sum, students seem ambivalent about social interactions: they hesitate to enter social settings yet are not wholly withdrawn. Notably, they tend to prefer being alone more often, but they do not entirely avoid social contexts when necessary. These findings suggest a preference for maintaining a controlled social environment and managing socialization processes according to specific conditions.

Examining responses on the Isolation subscale indicates that for the item “I spend most of my time at home,” students, on average, selected “undecided.” This suggests that while they do spend time at home to some extent, it does not necessarily reflect pervasive isolation. Similarly, responses to “I rarely spend time alone” point to ambivalence about solitary time. The mean for “I have very little contact with others (e.g., talking, texting)” also falls at the undecided level, indicating that students’ social interactions may be limited. Responses to “I devote very little time to interacting with other people” and “I spend most of my time alone” likewise cluster around the undecided level. By contrast, the item “I shut myself in my room” was met with slight disagreement on average, and responses to “I do not live according to society’s rules and values” indicate ambivalence. Overall, the findings for the Isolation dimension suggest that students are not fully isolated, though their social interactions appear constrained. Their tendencies to spend time at home and to be alone are moderate, and they do not present as completely

withdrawn. Nevertheless, their social contact seems to be somewhat limited. This pattern implies a controlled approach to social interaction rather than complete self-separation.

Examining students' responses regarding perceived emotional support shows agreement with the statement "I have very few people with whom I can discuss important matters," suggesting that many perceive their social support network as limited. By contrast, the mean response to "There is no one truly important in my life" indicates disagreement, implying that most students feel there are important people in their lives. Responses to "There is someone I can trust with my problems" and "There are people in my life who try to understand me" fell at the "disagree" level, indicating that although students perceive some support, it is not strong. Responses to "I have no one with whom I can discuss truly important issues" clustered around "undecided," suggesting that students may have someone to confide in on certain topics but do not feel they possess a sufficiently broad support network. A similar ambivalence appears for "I can share my personal thoughts with more than one person." Overall, students seem to have individuals from whom they can seek support on important matters, but the adequacy of that support may vary. Some students report gaps in emotional support, whereas others indicate having a circle they can trust to some extent.

On the total scale, female students had higher mean scores than males. While females tended to fall within the "undecided" range, males were closer to "disagree." This pattern may indicate stronger tendencies toward hikikomori-type behaviors among female students, with lower levels among males. On the Socialization subscale, females again scored higher than males; females clustered around "undecided," whereas males were nearer to "disagree," suggesting that women are comparatively more willing to socialize and men more reticent. On the Isolation subscale, females' scores were significantly higher than those of males, although both groups remained in the "undecided" range. This finding points to a greater inclination among female students to spend time alone and to carve out solitary spaces. On the Emotional Support subscale, female students had lower mean scores than males; however, this difference was not statistically significant. Both groups fell at the "disagree" level. This suggests no pronounced gender-based difference in perceived emotional support, with both groups reporting similar perceptions. Overall, female students scored higher on the hikikomori and Isolation dimensions, indicating a greater tendency to spend time alone and withdraw from social settings. Male students showed a lower mean on Socialization compared with females, suggesting greater reticence in social interaction. With respect to Emotional Support, no significant gender difference emerged; both groups exhibited comparable perceptions. These results imply that female students display stronger isolation tendencies in social contexts, whereas male students appear more hesitant to socialize. While much of the literature reports higher hikikomori prevalence among males or no significant gender difference (Orsolini *et al.*, 2022; Tateno *et al.*, 2019; Yong *et al.*, 2020), some samples do report higher indices of loneliness/shyness among females (Diehl *et al.*, 2018). With respect to the Socialization subscale, the fact that women's mean is higher than men's yet still falls within the "undecided" band — while men cluster in the

“disagree” band—suggests a general reluctance/reticence to enter new social contexts and meet new people, whose tone nonetheless differs by gender. The prevalence of social/emotional loneliness and hesitation in social assertiveness among university-age students supports this interpretation (Diehl *et al.*, 2018). On the Isolation subscale, women’s significantly higher scores imply that tendencies to spend time alone or to protect one’s personal space may be more pronounced among women. Considering the HQ-25 items that directly probe behavioral withdrawal (e.g., reducing face-to-face meetings, staying in one’s room/home), this difference may be manifest more at the level of behavior than of preference/attitude (Teo *et al.*, 2018). Nevertheless, because the literature more frequently reports higher risk among males (Orsolini *et al.*, 2022; Yong *et al.*, 2020), these results should be interpreted in conjunction with contextual factors such as the campus setting, living arrangements, distribution across departments/fields, perceptions of safety, and patterns of social media use (Tateno *et al.*, 2019). The absence of a significant gender difference on the Emotional Support subscale—and the fact that both groups fall within the “disagree” band—indicates similar levels of perceived support by gender. This aligns with frameworks that distinguish objective isolation (number of ties/contacts) from subjective loneliness/perceived support: both dimensions can pose risks to health and functioning, and both call for strengthening support networks (peer mentoring, student organizations, counseling services) (Holt-Lunstad *et al.*, 2015).

When differences on the total scale and subscales were examined by academic department, Levene’s tests indicated that homogeneity of variance was violated for the Hikikomori, Socialization, and Emotional Support dimensions; therefore, the Kruskal–Wallis H (KWH) test was deemed more appropriate for these. For the Isolation dimension, between-group variance did not differ significantly, so ANOVA was used. For the Hikikomori total, departmental means were highest in History and Geography, while the remaining departments displayed very similar averages. However, the differences across departments were not statistically significant. On the Socialization subscale, departmental means indicate that Psychology students have the highest average, whereas History students have the lowest. However, no statistically significant differences were detected on this subscale. Given that Levene’s test indicated unequal variances across groups, the Kruskal–Wallis test is required for this dimension. For the Isolation subscale, no significant differences emerged across departments. Descriptively, the highest means were observed in Sociology, Turkish Language and Literature, and Child Development, while the lowest mean appeared among History students. On the Emotional Support subscale, History students reported the highest mean, whereas Psychology students reported the lowest. Overall, students indicated similar levels of emotional support across departments. Because Levene’s test showed unequal variances, the Kruskal–Wallis test is also required for this subscale. In general, no statistically significant differences were found across departments in students’ hikikomori, socialization, isolation, or emotional support levels. Nonetheless, certain descriptive tendencies emerge: Psychology students show the highest mean on Socialization;

Sociology students the highest on Isolation; History students report the greatest emotional support, while Child Development students report the lowest. These results suggest that individual and environmental factors may shape students' experiences, yet interdepartmental differences are not statistically significant.

To compare students' hikikomori tendencies across academic departments, the Kruskal–Wallis H (KWH) test was applied. Examination of mean ranks showed the highest rank among English Language and Literature students, and the lowest among Sociology students, with other departments falling in the middle range. This pattern suggests relatively higher hikikomori tendencies in English Language and Literature and lower tendencies in Sociology. However, the statistical analysis showed that the Kruskal–Wallis test yielded a p value greater than .05, indicating no significant differences in hikikomori tendencies across departments. In other words, students' academic department does not appear to be a determining factor for their hikikomori tendencies. Although some differences were observed in mean ranks, these were not statistically significant; therefore, no post hoc analyses were required. Overall, the findings suggest that hikikomori tendencies do not differ meaningfully by department. While English Language and Literature students exhibited a higher average, this difference was not statistically significant. These results imply that hikikomori tendencies are more likely related to individual and psychosocial factors than to academic department.

To test whether students' socialization levels differ by academic department, the Kruskal–Wallis H (KWH) test was applied. The results show that although mean ranks vary across departments, these differences are not statistically significant. The highest mean rank was observed in English Language and Literature, and the lowest in Turkish Language and Literature; however, since $p > .05$, these differences are not significant. Accordingly, students' socialization levels do not differ meaningfully by department. In sum, no statistically significant differences were found across departments on the socialization dimension, indicating that socialization levels do not vary substantially as a function of academic department.

To compare students' perceived emotional support across academic departments, the Kruskal–Wallis H (KWH) test was applied. The results indicate that Turkish Language and Literature had the highest mean rank, while Sociology had the lowest. This pattern suggests that students in Turkish Language and Literature perceive higher levels of emotional support compared with other departments, whereas Sociology students may perceive lower levels. However, since the Kruskal–Wallis p value exceeded .05, there is no statistically significant difference in perceived emotional support across departments. Accordingly, students' perceptions of emotional support appear to be independent of their academic department, and the department variable does not exert a notable effect. Overall, although some interdepartmental differences are observable—students in Turkish Language and Literature and Geography reporting higher perceived support, and those in Sociology and Psychology reporting lower—these differences did not reach statistical significance. This suggests that perceived emotional support is more closely associated with individual factors than with department.

When differences on the total scale and subscales were examined by daily social media use, students' hikikomori levels did not vary by usage duration. All groups clustered around the "undecided" range on average. The highest means were observed among those using social media 4–6 hours and 6–8 hours per day, and the lowest among those using it 2–4 hours; however, these differences were not statistically significant. Students' socialization levels likewise did not differ significantly by daily social media use. Responses generally centered on "undecided," with the highest mean in the ≥ 8 hours group; again, differences were not significant. Similarly, isolation levels showed no significant variation by usage duration. The highest isolation scores appeared in the 6–8 hours group, and the lowest in the 2–4 hours group, yet these differences were not statistically significant. Overall, these findings suggest that extended social media use does not exert a marked effect on isolation levels. Students' perceived emotional support did not differ significantly by daily social media use. The highest mean for emotional support was observed among those using social media 4–6 hours per day, and the lowest among those using it 2–4 hours; however, these differences were not statistically significant. These results indicate that the duration of social media use does not exert a marked effect on students' perceptions of emotional support. In sum, no statistically significant differences were found between daily social media use and the Hikikomori total, Socialization, Isolation, or Emotional Support subdimensions. This suggests that the amount of time students spend on social media does not meaningfully influence their isolation levels, socialization tendencies, or perceived emotional support. Although usage durations vary, students' psychosocial status does not appear to differ in a statistically significant way as a function of this variable. The absence of statistically significant differences in the Hikikomori total and the Socialization, Isolation, and Emotional Support subscales across daily social media-use groups suggests that usage duration, by itself, may be a weak indicator for explaining withdrawal tendencies. The literature likewise shows that the effect of "time spent" is contingent on context and usage patterns (active vs. passive use, purpose, platform), and that associations with loneliness/isolation can be small, bidirectional, and heterogeneous (Chen, Toyama, & Yamada, 2024; Nowland, Necka, & Cacioppo, 2018; Primack *et al.*, 2017). In your sample, the fact that group means cluster largely within the "undecided" band points to a widespread but low-intensity, subclinical level of withdrawal (Teo *et al.*, 2018).

8. Recommendations

Based on the results of this study, various recommendations can be presented regarding students' socialization levels, isolation tendencies, and perceptions of emotional support:

- In order to reduce students' tendencies toward isolation, guidance and psychological counseling units should be made more active. Individual and group therapies should be offered especially for students who show a hikikomori tendency.

- To increase students' socialization levels, participation in student clubs should be encouraged, social activities should be organized, and areas in which students can take an active role should be created.
- Considering that there were no marked differences between departments in the study, projects and activities that encourage social interaction between faculties should be organized.
- To enable newly enrolled students to adapt more easily to the university environment, support programs can be created in which upper-class students provide mentoring.
- Universities should conduct psychosocial screenings for students and develop early intervention programs. Students with a tendency toward hikikomori should be supported with individual counseling services and social skills development programs.
- Activities and projects should be implemented that will help students establish strong social support ties with their families, friends, and academic circles.
- It is known that participation in cultural and artistic activities reduces social isolation. Therefore, the number of social activities appealing to students should be increased.
- Considering that the study was carried out on a limited university sample, it is recommended that future research be conducted on different universities and socioeconomic groups.

9. Limitations

This research was conducted within certain limitations:

- First, the study was limited to 406 university students enrolled at a public university in Turkey. Therefore, the generalizability of the findings is limited. Studies to be conducted at different universities and with students from different socioeconomic levels may increase the diversity and validity of the results.
- Second, the data used in the research are based on participants' self-reports. This may affect data reliability due to social desirability bias or errors stemming from personal perceptions. Especially for subjective topics such as socialization, isolation, and emotional support, it becomes difficult to provide an objective measurement because participants' responses are based on their own internal evaluations.
- Third, only demographic variables (gender, department, duration of social media use) were addressed in the study; other variables that may be influential – such as individuals' psychological states, family structures, and living conditions – were not included within the scope of the research. It should be borne in mind that these factors may also affect tendencies toward socialization, isolation, and emotional support.

- In addition, a cross-sectional research design was used in the study, and no longitudinal data were collected to examine change over time. This limits the ability to analyze the long-term change in students' tendencies regarding socialization, isolation, and emotional support.
- Finally, although the scales used in the study are valid and reliable, measuring multidimensional psychosocial phenomena such as socialization, isolation, and loneliness solely through quantitative tools may have restricted in-depth understanding of the topic. Therefore, it is recommended that future research also employ qualitative data collection methods (e.g., interviews or focus group discussions).

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Conflict of Interest Statement

The author declares no conflicts of interest.

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