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Posted Date: 7 November 2025

doi: 10.20944/preprints202511.0487.v1

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The Relationship Between Social Media Addiction and Social Phobia Among Saudi Adolescents: A Cross-Sectional Study

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Abstract

Social media addiction (SMA) and social phobia (SP) are significant adolescent mental health concerns. In Saudi Arabia, despite high social media penetration, the specific association between these two constructs remains under-researched, particularly in the Aseer region. This cross-sectional study aimed to examine this relationship, conducted from January–March 2025, recruiting 384 Saudi adolescents (aged 11–19) from schools using a multistage cluster sampling strategy. Participants completed validated self-report measures, including the Social Phobia Inventory (SPIN) and the Al-Menayes Social Media Addiction Scale. The prevalence of moderate-to-severe social phobia was 15.3%. A significant, moderate positive correlation emerged between SP and SMA scores (Spearman's *rho* = 0.294, $p < .001$). After adjusting for age, gender, and family income, adolescents with moderate social phobia had 2.17 times the odds of probable SMA compared to those with no social anxiety (Odds Ratio [OR] = 2.17; 95% CI [1.03–4.59]; $p = .043$). Social phobia and social media addiction are significantly intertwined public health challenges among Saudi adolescents in the Aseer region. These findings support the urgent need for integrated mental health and digital literacy interventions that proactively screen for both conditions.

Keywords: social media addiction; social phobia; social anxiety; adolescents; Saudi Arabia; mental health; cross-sectional study; Aseer region

1. Introduction

The proliferation of social media platforms has fundamentally transformed global communication patterns, with adolescents representing one of the most highly engaged user demographics [1]. In the Kingdom of Saudi Arabia, this digital transformation is particularly evident, characterized by near-universal smartphone ownership and the ubiquitous integration of platforms like Snapchat, TikTok, and Instagram into the daily lives of young people [2,3]. While these technologies offer unprecedented opportunities for social connection and self-expression, a growing body of empirical evidence links their excessive and problematic use to a range of adverse mental health outcomes, including depressive symptomatology, anxiety, and sleep disturbances [4,5].

Within the spectrum of adolescent mental health, social anxiety disorder (SAD), or social phobia, stands as one of the most prevalent anxiety conditions, with a typical onset during the developmentally sensitive period of adolescence [6,7]. Concurrently, the construct of "social media

 doi:10.20944/preprints202511.0487.v1

addiction" or problematic social media use—conceptualized as a behavioral pattern characterized by salience, mood modification, tolerance, withdrawal, conflict, and relapse—has gained significant recognition as a public health concern [8,9]. Emerging international research consistently demonstrates a significant positive association between these two phenomena [10,11]. Theoretical mechanisms proposed to explain this relationship include social comparison processes, where exposure to idealized online self-presentations fosters feelings of inadequacy [12], and the fear-of-missing-out (FOMO), which drives compulsive checking behaviors [13]. Furthermore, the displacement of critical face-to-face social interactions with digital communication may impede the development of social skills and reinforce avoidance behaviors, thereby maintaining or exacerbating social anxiety [14,15].

Despite the high penetration of social media and the established vulnerability of adolescents to anxiety disorders, a critical research gap exists in the Saudi context, particularly concerning the specific relationship between social media addiction and social phobia. Previous investigations within Saudi Arabia have primarily focused on the impact of social media on sleep quality [16], general mental health [17], or its prevalence among university students [18]. A recent study in the Aseer region, for instance, highlighted that over 40% of secondary school students reported daily social media use exceeding five hours, which was significantly associated with poor sleep quality [3]. However, no published study has yet specifically and simultaneously investigated social media addiction and social phobia among school-attending adolescents in this understudied region [19,20].

Therefore, this study aims to address this gap by examining the relationship between social media addiction and social phobia among adolescents in the Aseer Region of Saudi Arabia. The findings will provide essential foundational epidemiological data to inform targeted public health interventions and mental health promotion strategies for this vulnerable population.

2. Materials and Methods

2.1. Study Design and Setting

This analytic cross-sectional study was conducted between January and March 2025. The setting included public intermediate and secondary schools within the Aseer region, a major administrative area in southwestern Saudi Arabia.

2.2. Participants and Sampling

The study population comprised Saudi adolescents aged 11–19 years. Participants were recruited using a multistage cluster sampling strategy. First, the Aseer region was geographically stratified into its three principal governorates: Abha, Khamis Mushait, and Ahad Rufaidah. Second, from a comprehensive list of schools within each governorate, three schools were randomly selected, yielding a total of nine schools. Third, three classes were randomly chosen from each of the selected schools (total of 27 classes). All students within these classes who met the age and nationality inclusion criteria were invited to participate.

The minimum required sample size was calculated using OpenEpi (Version 3.0). Based on a previously reported 13% prevalence of social phobia [21], with a 5% margin of error, 95% confidence level, and 80% statistical power, the initial sample size was 174. To account for the cluster sampling method, a design effect of 2 was applied, increasing the minimum required sample size to 348.

A total of 452 students across the 27 selected classes were identified as eligible and invited to participate. From this group, 384 students provided assent and completed the survey, resulting in a final response rate of 85.0%. Non-participation (n=68) was primarily due to student absence on the day of data collection (n=40; 8.8% of those invited). The remaining eligible students declined to participate (n=28; 6.2%).

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2.3. Data Collection and Measures

Data were collected using a structured, self-administered questionnaire. A trained team, including the principal investigator and two research nurses, was present during data collection to clarify any ambiguities for the participants. The questionnaire collected information on socio-demographics and included validated scales to assess social media use, addiction, and social phobia.

- Socio-demographic and Health Information: Data on socio-demographic variables, including age, gender, parental education, parental occupation, and monthly family income, were collected. Height and weight were directly measured by trained research staff to calculate Body Mass Index (BMI), which was then categorized based on World Health Organization (WHO) criteria.
- Social Media Use: Participants reported their daily time spent on social media (categorized as <3, 3–5, or >5 hours) and identified the specific platforms they used from a checklist.
- Social Media Addiction (SMA): Measured using the Al-Menayes Scale [22], a 14-item instrument with Likert-type responses, was used to assess symptoms of social media addiction. A total score was calculated, where higher scores indicate a greater degree of addictive behavior.
- Social Phobia (SP): Measured using the Social Phobia Inventory (SPIN) [23]. This 17-item self-report scale assesses fear, avoidance, and physiological distress. The study used a validated Arabic version of the SPIN) [24], which has demonstrated good internal consistency in a relevant population (Cronbach's α = 0.80). Total scores were used to classify participants into severity categories based on established cutoffs: No/Minimal (0–20), Mild (21–30), Moderate (31–40), and Severe (41–68).

2.4. Ethical Considerations

The study protocol was approved by the Institutional Review Board (IRB) of the Armed Forces Hospital Southern Region. Written informed consent was secured from the parents or legal guardians of all participants, and written assent was obtained from the adolescents themselves. Participation was voluntary and anonymous, and the confidentiality of all data was maintained throughout the study.

2.5. Statistical Analysis

All data were analyzed using IBM SPSS Statistics for Windows (Version 28.0). Descriptive statistics (frequencies, percentages) were generated to summarize participant characteristics, social media usage, and the prevalence of social phobia.

The Shapiro-Wilk test indicated that the social phobia scores were not normally distributed ($p < .001$), necessitating the use of non-parametric tests. Bivariate analyses of categorical variables were conducted using the Pearson Chi-square test, with Fisher's exact test applied when expected cell counts were below five. The relationship between the continuous social media addiction score and the ordinal social phobia score was examined using Spearman's rank correlation coefficient (ϱ).

The primary analytic strategy involved multivariable logistic regression. While the outcome of social media addiction was initially conceptualized as ordinal, the proportional odds assumption required for ordinal regression was violated, as confirmed by the Test of Parallel Lines ($\chi^2(14) = 101.301$, $p < .001$). To ensure a statistically valid model, we proceeded with a binary logistic regression approach. For this analysis, the social media addiction score was dichotomized into a binary outcome: 'No/Low Addiction' (score < 45) versus 'Probable Addiction' (score ≥ 45). The model was constructed to evaluate the association between social phobia severity (predictor) and the likelihood of probable social media addiction (outcome), adjusting for the potential confounding effects of age, gender, and family income. Results were reported as Odds Ratios (OR) with 95% Confidence Intervals (CI). The model's validity was further supported as key assumptions, including the absence of

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multicollinearity and the linearity of the logit, were met. The Hosmer-Lemeshow test indicated good model fit ($\chi^2(8) = 9.159$, $p = .329$). For all inferential tests, a two-tailed p-value < .05 was considered statistically significant.

3. Results

3.1. Participant Characteristics

The study included 384 adolescent participants. Demographic and general characteristics are detailed in Table 1. The sample was predominantly male (58.3%, n=224) and aged between 14 and 16 years (52.9%, n=203). Half of the participants (50.0%, n=192) had a normal BMI, while 31.8% (n=122) were underweight. A majority (68.2%, n=262) reported a monthly family income between 5,001 and 20,000 Saudi Riyals. Regarding parental education, 48.9% (n=188) of fathers and 44.3% (n=170) of mothers had completed university-level education or higher. Most mothers were unemployed or retired (74.7%, n=287). Current smoking was reported by 4.4% (n=17) of participants.

Social phobia assessment data were available for 378 participants (98.4%). Of this subgroup, 71.2% (n=269) were classified as having no social anxiety. The remainder were categorized as having mild (13.2%, n=50), moderate (9.8%, n=37), or severe (5.8%, n=22) social phobia.

Table 1. Demographic and General Characteristics of Participants (N = 384).

Variable	Category	N (%)
Gender	Male	224 (58.3)
	Female	160 (41.7)
Age (in years)	11–13	90 (23.4)
	14–16	203 (52.9)
	17–19	91 (23.7)
BMI	< 18.5	122 (31.8)
	18.5–24.9	192 (50.0)
	25–29.9	38 (9.9)
	≥ 30	32 (8.3)
Monthly Family Income	< 5000 SR	45 (11.7)
	5001–20000 SR	262 (68.2)
	> 20000 SR	77 (20.1)
Educational Level of Father	Elementary or illiterate	26 (6.8)
	Intermediate or high school	170 (44.3)
	University or above	188 (48.9)
Educational Level of Mother	Elementary or illiterate	71 (18.5)
	Intermediate or high school	143 (37.2)
	University or above	170 (44.3)
Father Occupation	Unemployed or retired	108 (28.1)
	Military sector	163 (42.4)
	Non-military sector	113 (29.4)
Mother Occupation	Unemployed or retired	287 (74.7)
	Military sector	1 (0.3)
	Non-military sector	96 (25.0)
Current Smoking Status	Yes	17 (4.4)
	No	367 (95.6)
Social Phobia categories distribution	No social anxiety	269 (70.1)
	Mild	50 (13.0)
	Moderate	37 (9.6)
	Severe	22 (5.7

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3.2. Social Media Usage

As shown in Table 2, social media use was nearly universal, with 98.2% (n=377) of participants active on at least one platform. Among 383 respondents who provided data on usage duration, the most common daily duration was 3–5 hours (39.6%, n=152), followed by less than 3 hours (34.4%, n=132). Multiple selections were permitted for platform use. The most widely used platforms were Snapchat (84.4%, n=324), WhatsApp (83.1%, n=319), YouTube (81.5%, n=313), and TikTok (74.2%, n=285).

Table 2. Social Media Use Among Participants (N = 384).

Variable	Category	N (%)
Using social media	Yes	377 (98.2)
	No	7 (1.8)
Time spent on social media	< 3 hours	132 (34.4)
	3–5 hours	152 (39.6)
	> 5 hours	99 (25.8)
Twitter (X)	Yes	109 (28.4)
	No	275 (71.6)
TikTok	Yes	285 (74.2)
	No	99 (25.8)
Instagram	Yes	188 (49.0)
	No	196 (51.0)
YouTube	Yes	313 (81.5)
	No	71 (18.5)
WhatsApp	Yes	319 (83.1)
	No	65 (16.9)
Snapchat	Yes	324 (84.4)
	No	60 (15.6)
Telegram	Yes	160 (41.7)
	No	224 (58.3)
Twitch	Yes	35 (9.1)
	No	349 (90.9)

Multiple selections were possible for social media platform use.

3.3. Association Between Participant Characteristics and Social Phobia

Associations between participant characteristics and social phobia severity were evaluated among the 378 participants with complete data (Table 3). A significant association was found between social phobia severity and gender (p = .003); the proportion of females increased across the severity levels, from 36.8% in the no-anxiety group to 68.2% in the severe group.

Statistically significant associations were also observed for time spent on social media (p = .045), family income (p = .007), and mother's occupation (p = .006). The percentage of participants using social media for more than 5 hours daily rose from 23.9% in the no-anxiety group to 50.0% in the severe phobia group. No significant associations were found between social phobia severity and tobacco use (p = .598), BMI (p = .894), father's education (p = .558), mother's education (p = .515), or father's occupation (p = .705).

Table 3. Association of Demographic and Behavioral Characteristics with Social Phobia Severity (N = 384).

Characteristic	No Social Anxiety (n=269)	Mild (n=50)	Moderate (n=37)	Severe (n=22)	*p*-value
Gender					.003*
Female	99 (36.8%)	22 (44.0%)	22 (59.5%)	15 (68.2%)	

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Male	170 (63.2%)	28 (56.0%)	15 (40.5%)	7 (31.8%)	
Tobacco Use					.598
No	259 (96.3%)	46 (92.0%)	35 (94.6%)	21 (95.5%)	
Yes	10 (3.7%)	4 (8.0%)	2 (5.4%)	1 (4.5%)	
Body Mass Index					.894
Underweight	88 (32.7%)	16 (32.0%)	10 (27.0%)	7 (31.8%)	
Normal	132 (49.1%)	24 (48.0%)	21 (56.8%)	11 (50.0%)	
Overweight	25 (9.3%)	7 (14.0%)	3 (8.1%)	3 (13.6%)	
Obese	18 (6.7%)	3 (6.0%)	3 (8.1%)	0 (0.0%)	
Morbidly Obese	6 (2.2%)	0 (0.0%)	0 (0.0%)	1 (4.5%)	
Father's Education					.558
Elementary or less	18 (6.7%)	1 (2.0%)	4 (10.8%)	2 (9.1%)	
Intermediate or high school	118 (43.9%)	26 (52.0%)	16 (43.2%)	7 (31.8%)	
University or above	133 (49.4%)	23 (46.0%)	17 (45.9%)	13 (59.1%)	
Mother's Education					.515
Elementary or less	43 (16.0%)	10 (20.0%)	10 (27.0%)	6 (27.3%)	
Intermediate or high school	106 (39.4%)	16 (32.0%)	13 (35.1%)	6 (27.3%)	
University or above	120 (44.6%)	24 (48.0%)	14 (37.8%)	10 (45.5%)	
Family Income (SAR)					.007†
Less than 5,000	26 (9.7%)	2 (4.0%)	8 (21.6%)	6 (27.3%)	
5,001–20,000	189 (70.3%)	37 (74.0%)	25 (67.6%)	9 (40.9%)	
More than 20,000	54 (20.1%)	11 (22.0%)	4 (10.8%)	7 (31.8%)	
Father's Occupation					.705
Unemployed or Retired	77 (28.6%)	11 (22.0%)	11 (29.7%)	7 (31.8%)	
Non-military sector	75 (27.9%)	14 (28.0%)	14 (37.8%)	7 (31.8%)	
Military sector	117 (43.5%)	25 (50.0%)	12 (32.4%)	8 (36.4%)	
Mother's Occupation					.006†
Unemployed or Retired	198 (73.6%)	38 (76.0%)	31 (83.8%)	15 (68.2%)	
Non-military sector	71 (26.4%)	12 (24.0%)	6 (16.2%)	6 (27.3%)	
Military sector	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (4.5%)	
Social Media Use					.045*
Less than 3 hours	96 (35.8%)	20 (40.0%)	10 (27.0%)	3 (13.6%)	
3–5 hours	108 (40.3%)	21 (42.0%)	13 (35.1%)	8 (36.4%)	
More than 5 hours	64 (23.9%)	9 (18.0%)	14 (37.8%)	11 (50.0%)	

Data are presented as n (%). *Statistically significant ($p < .05$) based on the Chi-square test. †Statistically significant ($p < .05$) based on Fisher's exact test. SAR: Saudi Riyal.

3.4. Correlation Between Social Phobia and Social Media Addiction

A bivariate correlation analysis was conducted to assess the relationship between social phobia score and social media addiction. The analysis included 377 participants for whom complete data were available for both variables. As detailed in Table 4, Spearman's rank correlation revealed a statistically significant, weak-to-moderate positive correlation between the social phobia score and social media addiction ($\varrho = 0.294$, $p < .001$).

Table 4. Correlation Between Social Phobia Score and Social Media Addiction.

Variable	Social Phobia Score	Social Media Addiction
Social Phobia Score		
Spearman's rho	1.000	0.294**
p-value (2-tailed)	–	< .001
N	378	377
Social Media Addiction		

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Spearman's rho	0.294**	1.000
p-value (2-tailed)	< .001	–
N	377	383

Note. Complete data for both variables were available for 377 participants (98.2% of the total sample of 384). Missing data were handled using listwise deletion. **Correlation is significant at $p < .01$ (two-tailed).

3.5. Predictors of Social Media Addiction

A multivariate logistic regression analysis was performed to identify predictors of social media addiction, with results presented in Table 5. The model adjusted for age, gender, family income, and social phobia severity. After adjustment, moderate social phobia was the sole significant predictor of social media addiction, with these participants being more than twice as likely to exhibit addiction compared to those with no social anxiety (OR = 2.17, 95% CI [1.03, 4.59], p = .043). Mild social phobia (p = .084) and severe social phobia (p = .376) were not statistically significant predictors in the final model. Age, gender, and family income also did not emerge as significant predictors of social media addiction.

Table 5. Predictors of Social Media Addiction: A Multivariate Logistic Regression Analysis.

Variable	OR	95% CI	*p*-value
Age (per year increase)	1.06	0.92–1.21	.435
Gender			
Female	1.00	Reference	
Male	0.62	0.38–1.03	.063
Family Income (SAR)			
More than 20,000	1.00	Reference	
Less than 5,000	0.62	0.30–1.28	.192
5,001–20,000	0.54	0.23–1.30	.170
Social Phobia Severity			
No Social Anxiety	1.00	Reference	
Mild	1.83	0.92–3.64	.084
Moderate	2.17	1.03–4.59	.043*
Severe	1.56	0.59–4.14	.376

*Statistically significant (p < .05). SAR: Saudi Riyal. Variables entered in the model: Age, Gender, Family Income, and Social Phobia Severity.

4. Discussion

This study presents a robust epidemiological analysis of the association between SP and SMA in the specific cultural context of adolescents in Saudi Arabia. Our findings highlight a substantial, and previously under-quantified, public health issue.

First, we identified a significant burden of psychosocial morbidity. Among 378 participants with complete data, the point prevalence of any self-reported SP symptom was 28.8%, while the prevalence of clinically significant (moderate to severe) symptoms was 15.6% (n=59). This figure for clinically significant SP not only exceeds the 13% previously reported in a broader Saudi adolescent cohort [21] but also surpasses the upper range of most international lifetime prevalence estimates (7–13%) [6,25,26], underscoring the severity of this issue within our study population.

Second, we empirically quantified the potent association between these two constructs. SP and probable SMA were significantly correlated (Spearman's ϱ=0.294, p<0.001). In our multivariate model, moderate SP emerged as an independent predictor of probable SMA; adolescents with moderate SP had 2.17-times the odds of probable SMA compared with peers reporting no social anxiety (OR 2.17, 95% CI 1.03–4.59; p=0.043).

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This strong association provides quantitative support for the social compensation hypothesis [27,28]. This model posits that individuals with SP, who fear and avoid face-to-face interactions, preferentially use the controlled, asynchronous environment of social media. While this digital medium might initially serve as a buffer against the fear of negative evaluation, our findings suggest this compensatory strategy can become maladaptive, fostering a transition to problematic or addictive use.

The specific finding that moderate SP, rather than severe SP, was the significant independent predictor is noteworthy. We hypothesise that individuals with mild SP might not require such extensive online compensation. The lack of a statistically significant effect in the severe SP group (n=22) is likely attributable to insufficient statistical power to detect a true effect. This interpretation is supported by descriptive data showing that the proportion of participants with high daily social media use increased with SP severity.

Although our cross-sectional design precludes establishing causality, these data are consistent with a potential reinforcing cycle: socially anxious adolescents seek online refuge (compensation), which may foster dependence, thereby reinforcing real-world social skills deficits and avoidance, and ultimately exacerbating their SP [29,30]. The observed gender disparity, with females reporting higher SP, aligns with established literature on the prevalence of internalising disorders in female adolescents [31–33].

These findings have direct implications for clinical practice and public health policy. Clinicians treating adolescents with social anxiety should proactively screen for problematic social media use as a potential comorbidity. Conversely, individuals presenting with SMA should be assessed for underlying SP, which might be the primary driver of the behaviour. In educational settings, our data underscore the need for integrated programmes that extend beyond simple digital literacy to simultaneously address mental health, promote adaptive coping mechanisms, and build real-world social competence.

Limitations

These findings must be interpreted within the context of several critical limitations. The foremost is the cross-sectional design, which inherently prohibits any inference of causality. We have demonstrated a strong, significant association, but we cannot conclude that SP causes SMA. It is equally plausible that problematic social media use with its attendant social comparisons and potential for negative online interactions exacerbates or even triggers social anxiety. This question of temporality can only be resolved through future longitudinal cohort studies.

Second, this study relied exclusively on self-report measures. This introduces potential recall bias (particularly for daily hours of use) and social desirability bias. Given the stigma surrounding mental health in many contexts, it is possible that the true prevalence of both SP and SMA has been underestimated in our sample. Third, our sampling frame was limited to adolescents enrolled in school, thereby excluding those who have dropped out, a population that may be at even higher risk for both conditions. Finally, while our regression model adjusted for key demographics, it may be subject to residual confounding from unmeasured variables, such as comorbid depression, generalized anxiety, or underlying personality traits.

5. Conclusions

This study provides quantitative evidence that SP and SMA are closely associated public health challenges among adolescents in the Aseer region of Saudi Arabia. The high prevalence of clinically significant SP (15.6%) identified in our cohort, coupled with the 2.17-fold increased odds of probable SMA among moderately affected individuals, presents a clear mandate for integrated clinical and public health interventions.

Author Contributions: Conceptualization, O.A.k. and F.A.; methodology, O.A.k. and A.M.A.; formal analysis, A.M.A.; investigation, O.A.k., Mo.A., A.S.A., Ab.S.A., Mu.A., Muh.A., R.A., Ab.A., and As.A.; data curation,

 doi:10.20944/preprints202511.0487.v1

O.A.k. and Mo.A.; writing—original draft preparation, O.A.k.; writing—review and editing, O.A.k., A.M.A., Mo.A., A.S.A., Ab.S.A., Mu.A., Muh.A.,M.M., R.A., Ab.A., As.A., and F.A.; supervision, F.A.; project administration, F.A.; funding acquisition, F.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study protocol was approved by the Institutional Review Board (IRB) of the Armed Forces Hospital Southern Region (IRB# H-06-K-001)

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author due to ethical approval requirements.

Acknowledgments: We thank the adolescents who participated in this study, as well as the school administrators and staff in the Aseer region for facilitating data collection. We are also grateful to the regional educational authorities for granting approval for the research.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

BMI	Body Mass Index
FOMO	Fear-Of-Missing-Out
SAR	Saudi Riyal
SMA	Social Media Addiction
SP	Social Phobia
SPIN	Social Phobia Inventory
WHO	World Health Organization

References

1. Kelly Y, Zilanawala A, Booker C, Sacker A. Social media use and adolescent mental health: findings from the UK Millennium Cohort Study. EClinicalMedicine. 2018;6:59-68. doi:10.1016/j.eclinm.2018.12.005.
2. Ibrahim NK, Baharoon BS, Banjar WF, Jar AA, Ashor RM, Aman AA, Al-Ahmadi JR. Mobile phone addiction and its relationship to sleep quality and academic achievement of medical students at King Abdulaziz University, Jeddah, Saudi Arabia. Journal of Research in Health Sciences. 2018;18(3):e00420.
3. Al-Garni AM, Alamri HS, Alalmaei WM Asiri, Abudasser AM, Alawashiz AS, Badawi FA, Alqahtani GA, Alnasser SA, Assiri AM, Alshahrani KT, Asiri OA, Moalwi OH, Alqahtani MS, Alqhatani RS. Social media use and sleep quality among secondary school students in Aseer Region: a cross-sectional study. International Journal of General Medicine. 2024;17:3093-3106. doi:10.2147/IJGM.S464457.
4. Yang J, Fu X, Liao X, Li Y. Association of problematic smartphone use with poor sleep quality, depression, and anxiety: a systematic review and meta-analysis. Psychiatry Research. 2020;284:112686. doi:10.1016/j.psychres.2019.112686.
5. Valkenburg PM, Meier A, Beyens I. Social media use and its impact on adolescent mental health: An umbrella review of the evidence. Current Opinion in Psychology. 2022;44:58-68. doi:10.1016/j.copsyc.2021.08.017.
6. Burstein M, He JP, Kattan G, Albano AM, Avenevoli S, Merikangas KR. Social phobia and subtypes in the National Comorbidity Survey–Adolescent Supplement: prevalence, correlates, and comorbidity. Journal of the American Academy of Child & Adolescent Psychiatry. 2011;50(9):890-899. doi:10.1016/j.jaac.2011.07.005.
7. Beesdo K, Knappe S, Pine DS. Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. Psychiatric Clinics of North America. 2009;32(3):483-524. doi:10.1016/j.psc.2009.06.002.

8. Griffiths MD. A 'components' model of addiction within a biopsychosocial framework. Journal of Substance Use. 2005;10(4):191-197. doi:10.1080/14659890500114359.
9. Amirthalingam J, Khera A. Understanding Social Media Addiction: A Deep Dive. Cureus. 2024;16(10):e72499. doi:10.7759/cureus.72499. PMID:39600781; PMCID:PMC11594359.
10. Ding H, Cao B, Sun Q. The association between problematic internet use and social anxiety within adolescents and young adults: a systematic review and meta-analysis. Frontiers in Public Health. 2023;11:1275723. doi:10.3389/fpubh.2023.1275723.
11. Mojtabai R. Problematic social media use and psychological symptoms in adolescents. Social Psychiatry and Psychiatric Epidemiology. 2024;59(12):2271-2278. doi:10.1007/s00127-024-02657-7. PMID:38584201; PMCID:PMC11522145.
12. Vogel EA, Rose JP, Roberts LR, Eckles K. Social comparison, social media, and self-esteem. Psychology of Popular Media Culture. 2014;3(4):206-222. doi:10.1037/ppm0000047.
13. Przybylski AK, Murayama K, DeHaan CR, Gladwell V. Motivational, emotional, and behavioral correlates of fear of missing out. Computers in Human Behavior. 2013;29(4):1841-1848. doi:10.1016/j.chb.2013.02.014.
14. Škařupová K, Ólafsson K. The relationship between online and offline social skills in adolescents. Computers in Human Behavior Reports. 2020;2:100021. doi:10.1016/j.chbr.2020.100021.
15. Kuss DJ, Griffiths MD. Online gaming addiction in children and adolescents: A review of empirical research. Journal of Behavioral Addictions. 2012;1(1):3-22. doi:10.1556/JBA.1.2012.1.1.
16. Bin Eid W, Lieu AA, Neoh MJY, Al-Zoubi SM, Esposito G, Dimitriou D. Characteristics of Sleep Patterns in Adolescents: Comparisons between Saudi Arabia and the UK. Healthcare (Basel). 2022;10(8):1378. doi:10.3390/healthcare10081378. PMID:35893200; PMCID:PMC9332443.
17. Faqihi FA, Qutob RA, Subh RHM, Aljathalin LAM, Alshalan LZ, Yati SMA, Alaryni A, Alghamdi A, Alsolamy E, Bukhari A, Alanazi A, Hazazi BHA, Abuhemid HA, Alassaf RA, Alzahrani SSM. Examining the Effects of Social Media on Mental Health Among Adolescents in Saudi Arabia. Cureus. 2024;16(1):e53261. doi:10.7759/cureus.53261. PMID:38435934; PMCID:PMC10904877.
18. Alfaya MA, Abdullah NS, Alshahrani NZ, Alqahtani AAA, Algethami MR, Al Qahtani ASY, Aljunaid MA, Alharbi FTG. Prevalence and Determinants of Social Media Addiction among Medical Students in a Selected University in Saudi Arabia: A Cross-Sectional Study. Healthcare (Basel). 2023 May 10;11(10):1370. doi: 10.3390/healthcare11101370. PMID: 37239655; PMCID: PMC10217812.
19. Keles B, McCrae N, Grealish A. A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. International Journal of Adolescence and Youth. 2020;25(1):79-93. doi:10.1080/02673843.2019.1590851.
20. Saquib N, Saquib J, AlSalhi A, Colder Carras M, Labrique AB, Al-Khani AM, Almazrou A. The associations between family characteristics and problematic Internet use among adolescents in Saudi Arabia. International Journal of Adolescence and Youth. 2023;28(1):2256826. doi:10.1080/02673843.2023.2256826.
21. Al-Habeeb A, Qureshi N, Al-Ateeq D, Al-Sharqi A, Al-Jadidi A, Al-Shammari D, … (other authors) The Saudi National Mental Health Survey: prevalence of mental disorders. Eastern Mediterranean Health Journal. 2021;27(12):1160-1171. doi:10.26719/2021.27.12.1160.
22. Al-Menayes J. Psychometric Properties and Validation of the Arabic Social Media Addiction Scale. Journal of Addiction. 2015;2015:291743. doi:10.1155/2015/291743.
23. Connor KM, Davidson JRT, Churchill LE, Sherwood A, Foa E, Weisler RH. Psychometric properties of the Social Phobia Inventory (SPIN): New self-rating scale. The British Journal of Psychiatry. 2000;176(4):379-386. doi:10.1192/bjp.176.4.379.
24. Alyahri A, Al-Gamal E. The psychometric properties of the Arabic version of the Social Phobia Inventory (SPIN). Journal of Psychiatric & Mental Health Nursing. 2019;26(9-10):307-315. doi:10.1111/jpm.12529.
25. Jefferies P, Ungar M. Social anxiety in young people: A prevalence study in seven countries. PLoS ONE 15(9): e0239133.
26. Acarturk C, de Graaf R, van Straten A, ten Have M, Cuijpers P. Social phobia and number of social fears, and their association with comorbidity and functional disability. Social Psychiatry and Psychiatric Epidemiology. 2008;43(2):104-111. doi:10.1007/s00127-007-0275-5.

 doi:10.20944/preprints202511.0487.v1

27. Lee-Won RJ, Herzog L, Park SG. Hooked on Facebook: The role of social anxiety and need for social assurance in problematic use of Facebook. Cyberpsychology, Behavior, and Social Networking. 2015;18(10):567-574. doi:10.1089/cyber.2015.0202.
28. Prizant-Passal S, Shechner T, Aderka IM. Social anxiety and internet use: A meta-analysis. Computers in Human Behavior. 2016;62:214-221. doi:10.1016/j.chb.2016.03.072.
29. Marino C, Gini G, Vieno A, Spada MM. The associations between problematic Facebook use, psychological distress and well-being among adolescents and young adults: A systematic review and meta-analysis. Journal of Affective Disorders. 2018;226:274-281. doi:10.1016/j.jad.2017.10.007.
30. Naslund JA, Bondre A, Torous J, Aschbrenner KA. Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice. J Technol Behav Sci. 2020 Sep;5(3):245-257. doi: 10.1007/s41347-020-00134-x. Epub 2020 Apr 20. PMID: 33415185; PMCID: PMC7785056.
31. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Archives of General Psychiatry. 2005;62(6):593-602. doi:10.1001/archpsyc.62.6.593.
32. McLean CP, Asnaani A, Litz BT, Hofmann SG. Gender differences in anxiety disorders: prevalence, course of illness, comorbidity and burden of illness. Journal of Psychiatric Research. 2011;45(8):1027-1035. doi:10.1016/j.jpsychires.2011.03.006.
33. Asher M, Asnaani A, Aderka IM. Gender differences in social anxiety disorder: A review. Clinical Psychology Review. 2017;56:1-12. doi:10.1016/j.cpr.2017.05.004.