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The predictive ability of selfies and internet addiction on social appearance anxiety among Jordanian private university students

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Abstract

The present study investigates whether selfies and Internet addiction predict social appearance anxiety among students at private Jordanian universities, considering the impact of gender, specialization, and academic stage using a descriptive correlational approach. 1,500 male and female students from private universities in Jordan participated in this study, selected through a non-probability convenience sampling method. Three measures were employed to achieve the study's results: the Selfie Inventory (SI), the Internet Addiction Inventory (IAI), and the Self-Administered Addiction Inventory (SAAI). Students at Jordan's private universities reported a medium level of selfies and Internet addiction. In contrast, social appearance anxiety was low. The results also revealed that the predictive model of the variables influencing social appearance anxiety was statistically significant ($\alpha = 0.05$), with a joint contribution of the independent variables accounting for 45.00%. Selfies contributed the most, with a relative effect, explaining 38.30% of the total variance. Internet addiction accounted for 6.70% of the total variance. When selfies increase by one standard unit, social anxiety rises by 0.840. Similarly, when Internet addiction increases by one standard unit, social anxiety rises by 0.713 of a standard unit.

Keywords: Anxiety, Internet addiction, Selfies, Social appearance anxiety, Social media platforms.

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Contents

Contribution of this paper to the literature
This study contributes to the existing literature by highlighting the role of selfie-taking in intensifying appearance-related social anxiety. It aligns with prior research that links increased self-focus, social comparison, and digital image modification to body dissatisfaction, while offering further insight into how these behaviors particularly affect adolescents and females in a contemporary digital context.

1. Introduction

1.1. Literature Review

Social media platforms have become essential venues for people to develop and present their online identities, resulting in a dramatic shift in self-expression and identity formation brought about by the advent of technology (El Yazidi, 2024). The Internet has significantly reshaped information sharing, employment opportunities, communication, education, interpersonal relationships, commerce, entertainment, and socialization (Joseph et al., 2021). College students are more susceptible to Internet dependency than most other segments of society due to several factors, including ample free time, accessibility, developmental and psychological characteristics, and paternal oversight. Students also extensively use the Internet in education, particularly for online courses, which include assignments, projects, and communication with peers and mentors.

The use of the Internet also serves as a tool for alleviating exam-related stress (Sarıalioğlu, Atay, & Arıkan, 2022). Recent investigations have shown that university students are prone to Internet addiction, which detrimentally affects their cognitive performance, academic outcomes, and engagement in risky behaviors, and may contribute to heightened levels of anxiety and stress (Albikawi, 2023; Marzilli, Cerniglia, Ballarotto, & Cimino, 2020; Zenebe et al., 2021). Internet addiction is characterized by psychological symptoms, including preoccupation (where a person feels excessively interested in the Internet, hides their behaviors from others, and may lose interest in engaging in activities or relationships in favor of spending more time alone online), excessive use (where a person engages in compulsive actions and finds it difficult to control the time spent online, often hiding it from others), work neglect (where excessive Internet use impairs performance and productivity at work or school), anticipation (when an individual feels compelled to use the Internet while offline and considers using it when not in front of a computer), loss of control (where a person finds it difficult to manage their online time, often staying online longer than intended, and others may complain about the amount of time spent online), and social neglect (when a person uses the Internet to create social relationships that may be lacking in their life and regularly builds new interactions with other Internet users) (Young, 2009). A meta-analysis found a positive relationship between Internet addiction and selfie-taking behaviour (Sharma, Ranjan, & Kohli, 2021). Gender has a significant relationship with selfie-taking tendencies, with females exhibiting higher engagement than males (El Khoueiry et al., 2021). In contrast, Xiao, Chu, Wang, and Yang (2021) revealed no gender differences in taking selfies.

According to studies, taking selfies and posting them on social media are common habits among teenagers, as they help support their self-image by seeking appreciation from others (Lau & Idang, 2022). Social media photo sharing and advancements in mobile phone technology have contributed to this new phenomenon (Alam, Saif, Khan, & Ali, 2023). In 2014, the selfie phenomenon was identified by the American Psychiatric Association (2013) as a new psychological disorder characterized by a compulsive inclination to capture and share self-portraits on social media to address low self-esteem and perceived intimacy deficits. It is categorized into three levels depending on the frequency of selfie-taking: disorder or borderline (taking selfies without sharing them on social media at least three times a day), acute (uploading every selfie taken at least three times a day), and chronic (an insatiable need to snap selfies all day long and share photos more than six times a day). However, increased exposure to visual content on social media platforms may exacerbate social comparison tendencies and amplify appearance-related anxiety. Thus, digital activities related to body image may encourage individuals dissatisfied with their appearance to curate and project a more positive self-image online, potentially leading to problems in social media use (Baltaci, Akın, & Çelik, 2021). According to Lau and Idang (2022), higher degrees of social appearance anxiety were substantially correlated with the frequency of retouching selfies before sharing them online. Results of the study (Aslan & Tolan, 2022) also reported that social appearance anxiety, automatic thoughts, and social media addiction are positively correlated among university students. Appearance anxiety is referred to as excessive concern with one's physical appearance (Dogan & Çolak, 2016) and an apprehension of negative evaluation by others regarding aspects. It is an intrusive psychological condition marked by preoccupation with actual or perceived inadequacies in appearance and manifested by monotonous behaviors, such as self-checking, grooming, and using self-comparison to address these issues (Bond Jr, Guastello, & Guastello, 2017). Empirical studies, such as Liao, Xia, Xu, and Pan (2023) and Gao et al. (2023), have reported a high prevalence of anxiety in undergraduate students. Gender differences were evident. However, only one study reported high concerns about physical appearance among men. Their anticipation that selfies could enhance their self-esteem serves as a problematic aspect of social media use.

In contrast, girls experienced more anxiety about their social appearance, but this had no impact on how they used social media. Çetin and Ece (2021) identified gender-based differences in social appearance anxiety attributed to gender favoring men. Türkçapar (2022) revealed that gender did not statistically influence undergraduate students' social appearance anxiety levels.

The selfie phenomenon is a modern trend that primarily affects adolescents and young people, reflecting various psychological and neurological disorders. Social media selfies are a relatively recent development that has been significantly influenced by the increasing use of mobile phone applications and social media photo sharing. According to the study's findings, students' internet addiction is strongly predicted by their anxiety about their social appearance. The problem warrants further investigation due to the Internet's significance and pervasiveness in various aspects of modern life, as well as the scarcity of studies examining Internet addiction, selfies, and social appearance concerns among undergraduate students. This study addressed the following questions:

Question 1: To what extent are selfies, internet addiction, and social appearance anxiety prevalent among undergraduate students?

Question 2: What is the predictive ability of selfies and internet addiction on social appearance anxiety among undergraduate students?

2. Methodology

2.1. Research Design

This study investigates whether selfies and Internet addiction can predict social appearance anxiety among undergraduate students at Jordanian private universities. A quantitative method was employed. The study is designed as a correlational study, which allows for evaluating the relationship between the specified variables. A descriptive and analytical approach will be used to analyze the results, utilizing the quantitative data obtained from the participants' responses. A checklist of relevant scales, including the Selfie Inventory (SI), the Internet Addiction Inventory (IAI), and the Social Appearance Anxiety Inventory (SAAI), was developed and presented to experts for validation to ensure accuracy and applicability to the study sample.

2.2. Participants

1,500 students (male and female) from private universities in Jordan participated in this study. The subjects were selected using a convenience sampling approach. Participants were categorized according to demographic variables (gender, specialization, and academic level). Study instruments were administered electronically to participants through Google Forms, considering the geographical dispersion of the sample. This method facilitated accessibility and ensured broader participation, reflecting the diverse regional experiences of students. Detailed data are presented in Table 1.

Table 1. Demographic data of the study sample

Variables	Category	N	%
Gender	Female	1141	76.10
	Male	359	23.90
Specialization	Humanities	1022	68.10
	Scientific	478	31.90
Academic stage	Bachelor's	1412	94.10
	Postgraduate	88	5.90
Total		1500	100

2.3. Ethical Considerations

The researchers highlighted that participation is voluntary and that participants must (1) provide informed consent indicating their agreement to participate in the current study and fully understand its objectives and requirements. (2) Confirm their status as active users of various social media applications. (3) Ensure the confidentiality of the information provided by participants, with assurance that it would not be used for purposes other than research. A comprehensive explanation of the study's requirements and potential risks was provided, emphasizing participants' right to withdraw at any time without consequences.

2.4. Instruments

The researchers used the SI developed by Boursier and Manna (2018) after translating it into Arabic to examine the prevalence of selfie behavior among university students (Ajloun National, Irbid Private, Jadara, and Jerash). The scale consists of 12 items distributed across two dimensions.

2.5. Validation of the Original Inventory

Boursier and Manna (2018) established the validity of the original inventory by conducting an exploratory factor analysis, which revealed that the scale consists of three factors (dimensions). The reliability of the instrument was validated by computing the internal consistency reliability coefficient using Cronbach's alpha method, yielding coefficients ranging from 0.83 to 0.84 for the dimensions and 0.88 for the overall scale score.

2.6. Validation of the Study Inventory

The scale was translated from English to Arabic and then back into English by a third-party translation to ensure face validity. Semantic correctness was checked by comparing the two translations. A panel of knowledgeable academic members examined both the original and the translated versions to assess the correctness of the translation and the scale's content validity. Modifications to the language were made in response to their suggestions to improve clarity and appropriateness. The finalised scale version retained 12 items distributed across two dimensions: selfie-taking (8 items) and selfies for friendship (4 items).

2.7. Instrument Construct Validity

The construct validity of the measure was verified by administering the scale to a pilot sample of 30 students from the target study population. The Pearson correlation coefficient was calculated to determine the correlation values between each item and its respective dimension. Results are presented in detail in Table 2.

Table 2. Correlation coefficients between the items of the selfie scale and the scores on the corresponding dimensions, as well as the total score of the scale.

N	Correlation		N	Correlation		N	Correlation	
	Dimension	Overall	Dimension	Dimension	Dimension		Dimension	Total
1	0.71	0.62	5	0.80	0.73	9	0.70	0.66
2	0.66	0.58	6	0.70	0.58	10	0.69	0.57
3	0.78	0.70	7	0.61	0.56	11	0.74	0.68
4	0.73	0.67	8	0.49	0.40	12	0.66	0.59

The analysis indicates that the correlation coefficients of the scale items ranged between 0.49 and 0.80 with their respective dimensions and between 0.40 and 0.73 with the total score. All correlation coefficient values exceeded 0.20 and were statistically significant at α=0.05. According to Awda (2010), an item must have a correlation coefficient of at least 0.20 to be considered valid. Consequently, the scale remained in its final form, comprising 12 items distributed across two dimensions.

2.8. Scale Reliability

Cronbach's alpha was used to calculate internal consistency and assess the reliability of the scale. This was achieved by applying data from the initial application to the pilot sample, which included 30 target population students excluded from the main study sample. The same pilot group completed the scale again two weeks later to evaluate the scale and its dimensions. Pearson correlation coefficients were calculated to determine the level of consistency between the first and second applications. The results are presented in Table 3.

Table 3. Results of the retest reliability and internal consistency coefficients of the selfie scale and its dimensions.

Selfies and their dimensions	Test- retests	Internal consistency	Number of items
Selfie-taking measurements	0.82	0.78	8
Friendship selfies	0.80	0.75	4
Scale overall	0.84	0.81	**12**

Table 3 demonstrates that the retest reliability for the overall scale was 0.84. The retest reliability for its dimensions ranged between 0.80 and 0.82. The internal consistency reliability was 0.81, and the internal consistency reliability values for its dimensions ranged between 0.75 and 0.78. These values are considered acceptable for this study.

2.9. Scoring and Interpretation of the Selfie Inventory

The final version of the SI includes 12 items distributed across two dimensions. Respondents provide their answers using a five-point Likert scale with the following options: always (5 points), often (4 points), sometimes (3 points), rarely (2 points), and never (1 point). All items had a positively oriented scale. The scale range was determined by subtracting the lowest limit of the grading categories from the highest (5), resulting in a range of 4. The category range (four divided by three) was then calculated by dividing this value by the number of categories (3). The upper limit for each category was calculated by adding this value to the lowest scale score (1). The following categories were applied to the resultant score ranges: (5-1=4), (4 ÷ 3=1.33). Low (less than 2.33), medium (2.33–3.67), and high (more than 3.67).

2.10. Second: Internet Addiction Inventory (IAI)

The researchers used the Internet Addiction Inventory, developed by Cho et al. (2014), based on the Internet Gaming Disorder criteria proposed in DSM-5, after translating it from English to Arabic to examine Internet addiction prevalence among private university students. The original inventory consisted of 41 statements distributed across nine dimensions.

2.11. Validity and Reliability of the Original Inventory

Cho et al. (2014) established the validity of the original scale by conducting an exploratory factor analysis, which showed that the scale consisted of nine factors. The scale's reliability was also verified by computing the internal consistency reliability using Cronbach's alpha. Its value ranged between 0.49 and 0.91 for the scale dimensions, and the overall score was 0.98.

2.12. Face Validity

To check the face validity of the Internet addiction scale, translate it back into English through a third-party translation to ensure face validity. The initial translated version was presented alongside the original version and its procedural definitions in the current study to a group of faculty members with expertise to verify the translation's accuracy and the scale's content validity. Based on the suggestions of the arbitrators, necessary amendments were made, primarily related to refining the linguistic formulation of some paragraphs. Consequently, the revised scale consisted of 41 items distributed across 9 dimensions: preoccupation with the Internet (4 items); withdrawal symptoms when disconnected from the Internet (6 items); tolerance, which involves spending increasing amounts of time online (2 items); unsuccessful attempts to control Internet use (5 items); continued excessive use despite recognizing its negative impact (3 items); loss of interests and hobbies due to Internet use (2 items); using the Internet to escape from a dysphoric or disturbing mood (2 items); deceiving parents, therapists, or others about the extent of Internet use (3 items); and Internet use related to problems in various areas of life (2 items). The total number of items is 14.

A pilot sample of 30 male and female students from the study population and outside its sample was used to confirm the construct validity of the inventory. The correlation values between each item and its corresponding dimension were determined using the Pearson correlation coefficient, as indicated in Table 4.

Table 4. Results of the correlation coefficients between the items of the Internet addiction scale and their respective dimensions.

N	Correlation		N	Correlation		N	Correlation	
	Dimension	Overall		Dimension	Overall		Dimension	Overall
1	0.64	0.57	15	0.52	0.48	29	0.59	0.47
2	0.53	0.49	16	0.64	0.56	30	0.71	0.64
3	0.61	0.55	17	0.53	0.46	31	0.60	0.57
4	0.46	0.42	18	0.73	0.68	32	0.75	0.70
5	0.67	0.55	19	0.42	0.38	33	0.63	0.60
6	0.55	0.43	20	0.63	0.59	34	0.48	0.44
7	0.52	0.47	21	0.64	0.61	35	0.69	0.57
8	0.75	0.66	22	0.43	0.39	36	0.57	0.45
9	0.66	0.53	23	0.57	0.43	37	0.54	0.49
10	0.74	0.69	24	0.51	0.45	38	0.77	0.68
11	0.56	0.42	25	0.46	0.42	39	0.68	0.55
12	0.42	0.40	26	0.49	0.47	40	0.50	0.44
13	0.65	0.53	27	0.72	0.66	41	0.61	0.57
14	0.68	0.63	28	0.75	0.70			

Results presented in Table 4 indicate that the correlation coefficients ranged between 0.42 and 0.77 with their dimensions and between 0.38 and 0.70 with the total score of the scale. These values are higher than 0.20 and statistically significant at α=0.05. The accepted criterion requires that the correlation coefficient should not be less than 0.20 (Awda, 2010). The final inventory comprises 41 statements distributed across nine dimensions.

2.13. Reliability

Cronbach's alpha was applied to the data from the first application of the pilot sample, which comprised thirty male and female students from the study population and outside the sample, to assess the internal consistency reliability of the scale and its dimensions. The retest reliability of the scale's dimensions was further validated by reapplying the scale to the previous pilot sample two weeks after the first application. Results are shown in Table 5. The Pearson correlation coefficient between the pilot sample's first and second applications was computed.

Table 5. Test-retest reliability coefficients and internal consistency reliability of the Internet addiction scale and its dimensions

Internet addiction dimension	Test-retest	Internal consistency	N/items
Preoccupation	0.81	0.78	4
Withdrawal	0.83	0.80	6
Tolerance	0.78	0.76	2
Unsuccessful attempts	0.82	0.79	5
Continued excessive Internet use.	0.79	0.75	3
Loss of interest	0.77	0.72	2
Escaping from a dysphoric mood	0.80	0.77	3
Deceiving family members or therapists.	0.79	0.77	2
Using the Internet due to problems in various areas of life.	0.85	0.82	14
Overall scale	0.88	0.84	41

As shown by the analysis in Table 5, the retest reliability for the overall scale was 0.88. At the same time, for its dimensions, it ranged between 0.77 and 0.85. The internal consistency reliability for the overall scale was 0.84, and the internal consistency reliability values for its dimensions ranged between 0.72 and 0.82.

2.14. Scoring and Interpretation of the Internet Addiction Inventory

The approved version of the Internet Addiction Inventory comprises 41 items distributed across nine dimensions. A five-point scale was designed, including the following options: always (5 points), often (4 points), sometimes (3 points), rarely (2 points), and never (1 point). All items are positively oriented. The scale range was determined by subtracting the minimum value (1) from the maximum value (5), yielding a range of 4 to facilitate an objective interpretation of the average responses among the study participants. This range was then divided by the number of response categories (3) to calculate the category width (4÷3=1.334 \div 3 = 1.334÷3=1.33).
Next, the category width value (1.33) was added to the lowest scale point (1) to determine the upper limit for each category. Consequently, the score ranges for categorization were established as follows: low: less than 2.33; medium: 2.33–3.67; and high: greater than 3.67.

2.15. Third: Social Appearance Anxiety Inventory SAAI

The researchers utilized the SAAI (Veale et al., 2014), which had been translated into Arabic, to examine the level of social appearance anxiety among private university students in Jordan. The scale, in its initial form consisted of 12 items distributed across two dimensions.

2.16. Validity of the Original Inventory

Veale et al. (2014) verified the scale's validity by conducting an exploratory factor analysis that showed that the scale consisted of two factors; the first one explained 37.50% of the total variance. The second explanation was 22.80%. The scale's reliability was also verified by calculating the internal consistency reliability coefficient using Cronbach's alpha method, which yielded a value of 0.86.

2.17. Validity and Reliability of the Current Study's Inventory

The face validity of the Internet Addiction Inventory was ensured by a third-party translation back into English to guarantee face validity. The initial translated version was presented, along with the original version and its procedural definitions, to a group of faculty members with expertise to ensure the translation's accuracy and the scale's content validity. The proposed amendments related to amending the linguistic wording of some items, considering the arbitrators' suggestions. The approved scale comprises 10 items distributed across two dimensions: avoidance (6 items) and threat monitoring (4 items).

2.18. Construct Validity

The construct validity of the inventory used in this study was verified by applying it to a pilot sample of 30 students from the study population and outside the sample, and by calculating the Pearson correlation coefficient. The correlation of the items and their respective dimensions is shown in Table 6

Table 6. Results of the correlation coefficients between the items of the Social Appearance Anxiety Scale and its respective dimensions.

N	Correlation		N	Correlation		N	Correlation	
	Dimension	Overall		Dimension	Overall		Dimension	Overall
1	0.53	0.45	5	0.66	0.59	9	0.56	0.50
2	0.40	0.37	6	0.56	0.51	10	0.75	0.68
3	0.74	0.69	7	0.57	0.53			
4	0.52	0.46	8	0.61	0.53			

The scale's correlation coefficients ranged between 0.37 and 0.69 with the scale's overall score and between 0.40 and 0.75 with their values as Table 6 indicates. Every correlation coefficient value was greater than 0.20 and

statistically significant at the α=0.05 significance level. According to Awda (2010), the item had a correlation coefficient of at least 0.20 to be accepted. Therefore, in its final form, the scale had ten components spread across two dimensions.

2.19. Scale Reliability

The internal consistency reliability of the scale and its dimensions was assessed using Cronbach's alpha coefficient on data from the initial application to the pilot sample (n = 30) of male and female students. Reapplying the scale to the same pilot sample with a two-week interval between the first and second applications further confirmed the retest reliability of the scale dimensions. Table 6 displays the results of the Pearson correlation coefficient between the survey sample's first and second applications.

Table 7. Test-retest reliability coefficients and the internal consistency reliability of the social appearance anxiety scale

Internet addiction inventory	Test-retest reliability	Internal consistency	N/items
Avoidance	0.83	0.80	6
Threat monitoring	0.78	0.76	4
Overall	0.86	0.83	10

Table 7 demonstrates that the retest reliability for the overall scale was 0.86, the retest reliability for its dimensions ranged between 0.78 and 0.83, and the internal consistency for the overall scale was 0.83. Additionally, the internal consistency values for its dimensions ranged between 0.76 and 0.80, indicating acceptable scores for the current study.

2.20. Scoring and Interpretation of the SAAI

The SAAI, in its final version, consisted of 10 items distributed across two dimensions. A five-point scale was used, including the following options: always (5 points), often (4 points), sometimes (3 points), rarely (2 points), and never (1 point). All items are positively oriented. The range was calculated by subtracting the lower limit from the upper limit of the grading categories (5-1=4), then dividing this value by 3 ($4 \div 3 \approx 1.33$). This value was added to the lowest scale value (1) to determine the upper limit of each category for an objective judgment of the respondents' average responses. Consequently, the category ranges are as follows: low (less than 2.33), medium (2.33–3.67), and high (more than 3.67).

3. Results

Results of the first question: *To what extent are selfies, internet addiction, and social appearance anxiety prevalent among university students?*

Descriptive analysis (means and standard deviations) for the constructs of selfies, Internet addiction, and social appearance anxiety was calculated to address this question among participants. The dimensions of the respective scales were then ranked in descending order based on their arithmetic means. The results are presented in Tables 8, 9, and 10, providing a comprehensive overview of the distribution and ranking of the dimensions across the measured constructs.

Table 8. The means and standard deviations of the selfie scale and its dimensions among a sample of private university students, arranged in descending order according to their means.

Rank	Selfie and its dimensions	Mean	Standard deviation	Level
1	Selfie-taking	3.18	0.92	Medium
2	Friendship Selfies	3.11	1.02	Medium
	Overall	3.16	0.91	Medium

According to Table 8, the overall prevalence of selfies among the sample of private university students in Jordan was medium. Moreover, it was medium for both dimensions (general selfie-taking and selfies for friendship). General selfie-taking was the most frequently ranked activity by participants, followed by taking selfies for friendship.

Table 9. The means and standard deviations of the Internet addiction scale and its dimensions among the sample of private university students, arranged in descending order according to their means.

Rank	Internet addiction	Mean	Deviation	Level
1	Unsuccessful attempts to control Internet gaming use.	3.03	0.8	Medium
2	Preoccupation with the Internet	2.61	0.84	Medium
3	Withdrawal symptoms once the Internet is disconnected.	2.48	0.84	Medium
4	Escaping from a dysphoric mood	2.41	1.11	Medium
5	Continued excessive Internet use despite awareness of negative psychosocial problems.	2.41	1.09	Medium
6	Tolerance: increasingly spend time using the Internet.	2.39	1.14	Medium
7	Deceive parents, therapists, or others regarding the time spent on the Internet.	2.2	1.1	Low
8	Using the Internet due to problems in various areas of life.	2.08	0.82	Low
9	Loss of interest in his hobbies due to the Internet.	2.05	1.05	Low
	Overall (Internet addiction)	2.41	0.72	Medium

Analysis of data in Table 9 shows a moderate prevalence of Internet addiction among private undergraduate students in Jordan. Students reported a moderate level of Internet use for the following dimensions: failed attempts to control Internet use, preoccupation with the Internet, withdrawal symptoms when disconnected, using the Internet to escape from or alleviate a disturbing mood, continuing to overuse the Internet despite awareness of its negatives, and the need to spend increasing amounts of time online. Conversely, they reported low levels of Internet use for deceiving family members, therapists, or others regarding their Internet use, causing problems in various areas of life, and loss of interests and hobbies due to the Internet. Failed attempts to control Internet use ranked highest, followed by preoccupation with the Internet and withdrawal symptoms when disconnected (3.03, 2.61, 2.48,

respectively). Students at a private university in Jordan use the Internet to escape or alleviate a disturbing mood at the same rate as they continue to overuse it despite being aware of its drawbacks (mean, 2.41). Tolerance, measured by the need to spend increasing amounts of time online, was found at a moderate level (2.39).

However, the last three dimensions showed a low prevalence among students at private universities who were lying to family members, therapists, or others about how much they used the Internet, how it caused problems in different aspects of their lives, and how it caused them to lose their interests and hobbies (mean, 2.20, 2.08, 2.05).

Table 10. The means and standard deviations of the social appearance anxiety scale and its dimensions among a sample of private university students, arranged in descending order according to their means.

Rank	Social appearance anxiety	Mean	Deviation	Level
1	Threat monitoring	2.75	0.84	Medium
2	Avoidance	1.90	0.74	Low
	Overall	2.32	0.69	Low

Table 10 shows a low prevalence of social appearance anxiety among private university students in Jordan. The dimension of threat monitoring was at a medium level. In contrast, the dimension of avoidance was low. The dimensions are ordered as follows: threat monitoring in first place, followed by avoidance in second and last place.

2. Results of the second question: *What is the predictive ability of selfies and internet addiction on social appearance anxiety among university students?*

Addressing this question, the values of the linear correlation coefficients between the predictor variables (independent: selfies, internet addiction) and the predicted variable (dependent: social appearance anxiety) were computed among nursing students, as shown in Table 11.

Table 11. Matrix of the inter-correlation coefficients between the predictors and between the predictors and the criterion.

Variable	Selfies	Internet addiction
Internet addiction	*0.514	
Social appearance anxiety	*0.619	*0.570

Note: * Statistically significant at α=0.05.

Analysis in Table 11 revealed that the value of the correlation coefficient between the predictors was 0.514, which is statistically significant at $\alpha = 0.05$. The correlation coefficients between the predictors and the criterion ranged from 0.570 to 0.619, and all of them were statistically significant at $\alpha = 0.05$.

The stepwise method was employed to insert the predictor variables into the regression equation of the predictive model, and multiple linear regression analysis was conducted to determine the percentage of variance explained by the predictor variables of social appearance anxiety, as shown in Table 12.

Table 12. Results of the multiple regression analysis test for the effect of predictor variables on social appearance anxiety.

Sub-model	R	R^2	R^2 modified	Standard error	Change statistics				
					Change in R^2	F change	DF numerator	DF denominator	Sig. (F)
1	0.619	0.383	0.382	0.539	0.383	928.434	1	1498	*0.000
2	0.671	0.450	0.449	0.509	0.067	183.242	1	1497	*0.000

Note: 1. Predictors: (regression constant), selfies.
2. Predictors: (regression constant), selfies, and internet addiction
*Significant at the 0.05

Results from Table 12 indicate that the predictive model for variables influencing social appearance anxiety was statistically significant at the α=0.05 level. The independent variables collectively explained 45.00% of the variance in the dependent variable. Among the predictors, selfie emerged as the most influential, accounting for 38.30% of the explained variance. Internet addiction contributed 6.70% to the explained variance in the model. Additionally, the unstandardized and standardized regression weights, along with the calculated t-values for the predictors of the dependent variable, were determined for a sample of private university students, as shown in Table 13.

Table 13. Unstandardized and standardized weights of the variables predicting social appearance anxiety

Predictors	Unstandardized weights		Standardized weights	t	Sig.
	B	Standard error	*B*		
Intercept	0.631	0.048		13.053	*0.000
Selfies	0.680	0.091	0.840	7.473	*0.000
Internet addiction	0.564	0.116	0.713	4.862	*0.002

Note: *Statistically significant at the (0.05) level.

According to the results in Table 13, the regression equation for predicting social appearance anxiety is as follows: The level of social anxiety increases by 0.840 standard units whenever the level of selfies increases by one standard unit (SD), and by 0.713 standard units whenever the level of Internet addiction increases by one standard unit (SD).

$\hat{y} = 0.631 + 0.680x\_1 + 0.564x\_2$

Where,

$\hat{y}$: Social appearance anxiety, x_1: selfies, x_2: Internet addiction.

4. Discussion of Results

4.1. Interpretation of the Results of the First Question

The results of the study's first question revealed a moderate prevalence of selfies among private university students in Jordan. According to the findings, the sample of students attending private universities engaged in selfies at an average level. The two aspects of selfie-taking, general selfie-taking and taking selfies for friendship, were at a moderate level. However, taking selfies was the most popular activity compared to taking selfies for friends. Multiple

variables contribute to the moderate frequency of selfie-taking. Students may not have numerous opportunities to take selfies in everyday settings and specific places, which limits their freedom to take selfies.

Furthermore, they may not prioritize their physical appearance or the angles of their photos, resulting in ordinary or average-quality images. Some students may experience discomfort when taking selfies, which may be evident in their posture or facial expressions. Additionally, poor lighting conditions in some areas might degrade the quality of photos.

Selfies taken with friends are significant for preserving cherished memories and sharing everyday experiences unplanned and casually, such as capturing funny moments or hanging out with close friends. This demonstrates the importance of students in these kinds of social and emotional interactions.

Additionally, the findings showed that the sample's level of Internet addiction was moderate. This implies that students' use of the Internet falls between regular use and sporadic overuse, without ever approaching the level of severe addiction. Especially in the context of hybrid or online education, students often rely on the Internet for academic and research purposes, as well as to attend lectures. Some students may also use the Internet for leisure activities, such as playing video games to decompress or escape from the stress and boredom of their studies. Overindulgence in online activities can disrupt other facets of their lives, such as leisure activities or sleep.

Additionally, students spend time on social media sites like Facebook, Instagram, and TikTok, where they engage in conversations, browse content, and explore information. As a result, less time might be spent on taking, processing, or releasing images. However, the frequency of taking selfies remains evident because social networking sites offer a vast array of uses.

4.2. Social Appearance Anxiety

The sample exhibits a low level of social appearance anxiety. This finding suggests that students generally feel comfortable interacting with their peers and professors without significant concern about how their physical appearance is perceived. They probably place less importance on others' opinions about their appearance, indicating a higher degree of self-awareness and confidence. Students seem to prioritize developing their abilities and achieving academic success over attractiveness. They may experience less anxiety due to exposure to a diverse university community with students from various backgrounds. A supportive social environment and strong friendships likely help them build meaningful bonds based on respect and understanding.

However, students' engagement in photography and photo manipulation may also influence their perception of their appearance. According to studies by Gao et al. (2023) their high levels of social appearance concern run counter to earlier research findings. University students frequently display significant levels of appearance-related anxiety.

Regarding the predictive ability in social appearance anxiety, the predictive model explained it. The finding is attributed to the fact that students act in a manner that enhances social comparisons, elevates their anticipations about their social appearance, and relies on extrinsic assessments, especially since selfies explain 38.30% of social appearance anxiety, as the recurrence of taking selfies solely or with a group of friends or in multiple situations indicates this. Furthermore, this enhances their self-image, which makes people feel wanted and content with themselves, and it also increases the psychological strain and stress brought on by social appearance anxiety.

Their anxiety diminishes whenever the photos are adjusted to align with their preferences, and publishing and sharing the images with friends on social networking sites increases their satisfaction. Thus, the effect of selfies and Internet addiction on social appearance anxiety is interconnected and constant. This forms the behaviours associated with taking, storing, modifying, and publishing pictures. Lau and Idang (2022) indicated that the increased rate of modifying personal photos before publishing them on the Internet was significantly associated with higher anxiety about social appearance. Aslan and Tolan (2022) also showed a positive relationship between social appearance anxiety, automatic thoughts, and social media addiction in university students.

5. Conclusion

Excessive dependence on the Internet across various domains of life and in education at universities, particularly among students regardless of gender, specialization, and academic level, may contribute to an increased frequency of photo-taking, memory preservation, and editing to present the most favorable impression to others. Consequently, this behavior can lead to anxiety regarding social appearance among students. Consultants emphasize the importance of raising awareness about the effects of Internet addiction, strategies to mitigate this condition, and developing and implementing intervention programs to reduce social appearance anxiety among students and discourage comparative behaviors with peers on social media platforms.

This study investigated the predictive ability of selfies and Internet addiction in social appearance anxiety among students of private Jordanian universities, as well as the impact of various demographic factors, including gender, specialization, and academic level. The results revealed a medium level for each of the study variables (selfies and Internet addiction) and a low level on the social appearance anxiety scale among students of private universities in Jordan.

5.1. Limitations

This study identifies several limitations that may affect the generalizability of its findings. First, relying on self-reported instruments may introduce response bias, as respondents may underestimate or overestimate their behaviors and emotional states. Second, the sample was limited to students enrolled in private universities within a specific demographic, which may not accurately represent the broader population; therefore, the findings may not apply to all students or different cultural contexts. Additionally, the study design precludes the establishment of causal relationships, limiting the ability to determine definitive relationships over time. Finally, the rapid evolution of reliance on the Internet, social media platforms, and editing tools may also affect the relevance of the findings in future studies.

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