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# Association between Selfie Taking Behavior and Self-Esteem among Iraqi University Students: A Cross-Sectional Study

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## ABSTRACT

**Objective:** This study examined the prevalence of selfie taking behavior and self-esteem levels among Iraqi university students and analyzed the association between selfie behavior and self-esteem.

**Methods and Materials:** A descriptive correlational cross-sectional study was conducted from December 2023 to March 2024 in four colleges at the University of Baghdad. Using stratified random sampling, 372 students (263 males, 109 females) aged 19–24 years who owned smartphones with selfie cameras were recruited. Data were collected using a socio-demographic form, the Arabic Selfie Behavior Scale (20 items; six dimensions), and the Rosenberg Self-Esteem Scale (10 items). Both instruments demonstrated good reliability in the current sample. Data were analyzed with SPSS 24 using descriptive statistics, t tests to examine group differences, and simple linear regression to test whether selfie behavior predicted self-esteem.

**Findings:** Most students (64.6%) showed moderate selfie taking behavior, while 17.7% had mild and 17.7% severe levels. Regarding self-esteem, 74.2% had normal, 12.1% high, and 13.7% low self-esteem. Female students reported significantly higher selfie behavior scores than males ( $p = 0.006$ ), whereas no significant differences were found by college type. Regression analysis indicated that higher selfie behavior predicted lower self-esteem ( $B = -0.054$ ,  $\beta = -0.176$ ,  $p = 0.001$ ).

**Conclusion:** Selfie taking behavior is widespread among Iraqi university students and is associated with lower self-esteem, particularly among females. Psychoeducational programs are recommended to raise awareness of the potential psychological impacts of excessive selfie behavior and to promote healthier social media use.

**Keywords:** Selfie behavior, self-esteem, university students, social media, Iraq.

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## Introduction

In the Middle East nations, taking pictures for memories was not a big part of the culture, until selfies came into existence. Today, taking a picture of yourself (selfies) has become a phenomenon worldwide, especially among females at young ages. In the past few years, a great number of individuals, practiced taking selfies for themselves, which made the phenomenon of the selfies one of the interesting topics for researchers in the sociopsychological field. As a result, some research was conducted to examine this phenomenon and its relationship with individuals' personalities and their self-esteem (March & McBean, 2018).

A selfie is a picture that is taken by an individual to himself without the assistance of others, by using a fast self-portrait made with a smartphone or webcam that can be immediately posted and distributed into a social media<sup>[1]</sup>. As the phenomenon of taking and sharing selfies has become widespread between individuals around the world, several researchers have studied selfies from different socio-psychological perspectives. These studies can be classified into two main categories: studies that investigate how personality traits are related to selfies, and studies that investigate how people socially perceive selfies (Shin et al., 2017).

Selfies are becoming increasingly popular, especially among teens and young adults. On the other hand, taking selfies is more than just taking a photo, as it includes color and contrast adjustments, background changes, and other effects before uploading the photo to social networking sites. Selfies are a self-centered activity that enables users to define their individuality and connotations, and it is linked to personality traits such as narcissism. Selfies are a double-edged sword. For some people, taking selfies enhances their self-confidence, while for others, selfies are a source of their misery and insecurity about their external appearance. Most teenagers devote a great deal of time and money to appear desirable to others. Selfies have become an addiction among college students and have become a common topic in their lives (El-slamoni et al., 2021).

Selfie photography is a somewhat controversial issue. The American Psychiatric Association has confirmed that taking selfies is a mental disorder. Some psychologists also view selfies as a form of obsessive-compulsive disorder (Humaida, 2021). According Self-Verification

Theory, developed by William B. Swann Jr. within social psychology, posits that people strive to have their self-views confirmed, even if those views are negative, by seeking out social partners and environments that reflect their existing beliefs. This process aims to create a predictable and coherent sense of self and world, but it can lead to the perpetuation of negative self-perceptions and hinder personal growth. The theory highlights the fundamental human desire for consistency and control in one's life and interactions (Swann, 1987). The researchers also found that people with low self-esteem tend to engage more in the trend of taking selfies as well as using social media to mediate their interpersonal interactions in order to meet their self-esteem needs (Alblooshi, 2015).

Self-esteem is the general personal emotional assessment of students who engage in self-esteem through selfies. The individual's feeling of pressure due to his willingness to be ready in front of the phone camera can increase self-esteem problems and create a feeling of competition among friends. If the person posts a selfie on social media and only gets a small number of likes, the person may feel ugly or feel embarrassed, and he may want to remove his displayed image (Digamon et al., 2020).

Taking pictures for memories was not a big part of the culture of Eastern countries until selfies appeared. Today, taking a picture of yourself (selfie) has become a phenomenon all over the world. In the past few years, a large number of individuals have taken selfies of themselves, which has made the phenomenon of selfies one of the topics worthy of attention among researchers in the social psychological field (Humaida, 2021). The issue of low self-esteem and identity concern can emerge on individuals via different external behaviors. Past studies had found that talking a lot of selfies can be one of the behaviors that indicate a divergence on an individual's self-esteem (March & McBean, 2018). In an exploratory study consisted of 15 in-depth interviews with women who were 19-30 years of age, the searchers found that the issue of self-esteem can explain the behavior of taking a lot of selfies, in which woman who is deeply engaged in taking a lot of selfies is for the purpose of enhancing their self-esteem (Pounders et al., 2016). Moreover, a recent study conducted by Biolcati & Passini, (2018), found a positive correlation between the selfie posting behavior and the negative self-esteem of

individuals, and people with high self-esteem do not get to be involved in selfie posting behavior.

The researchers believes that “selfie” has a relation to individuals’ self-esteem and would like to find out statistically. The study objectives were determined by first to assess the prevalence of selfitis among collegian students and the level of self- esteem. Second to explore the impact of selfitis on self-esteem. The hypotheses of the current study was selfie taking behavior could predict effect on self-esteem.

## Methods and Materials

### *Study design and setting*

This research study used descriptive correlation to the variables to determine the significant impact of selfitis on self-esteem from December 2023 to March 2024. The study was conducted in the colleges of the University of Baghdad, from which only four colleges were selected to represent the main sample size for the current study. This study design was adopted from Saiwan, M.J., Hussein H.A., study which was about the level of anxiety and depression among middle school students and to identify if emotion expression and parental attachment can mediate students’ proneness to develop anxiety and depression (Siwan & Huusein, 2022).

### *Study participants and sampling*

The current research community consists of students (College of Arts, College of Nursing, College of Languages, College of Ibn Rushd Education) at the University of Baghdad for preliminary studies, male and female, and their number is (372 ) male and female students, if the number of males is (263 ) and the number of females is (109 ). The current research samples were selected using a stratified random sampling method with an appropriate selection from the colleges above. The inclusion criteria were being between the ages of 19 and 24 for both genders, being willing to take part in the current study, and not having had a co-morbid mental health condition or physical ailment during the previous six months and they all have a selfie camera in their mobile phones. The sample size was calculated using the EpiInfo version 7.0 (EPI info 7) programs, setting the type-1 error ( $\alpha$ ) at 0.05, and the power ( $1-\beta$ ) at 0.80 and assuming a 15% prevalence of selfie phenomenon in the university students (Balakrishnan & Griffiths, 2018).

With a margin of error 5% and at 95% confidence level, a sample size of 372 students will be needed.

### *Data collection tool and technique*

We conducted semi-structured interviews and document analysis for data gathering. Data were gathered using a standardized self-report questionnaire. Questionnaires about demographics, The Selfe Behavior Scale (SBS) (Arabic version) In 2018, (Balakrishnan & Griffiths, 2018) and Griffiths (Varma et al., 2020) developed a validated tool for the assessment of selfie behavior. They divided the scale into 6 items: the first one being environmental enhancement followed by social competition, attention-seeking, mood modification, self-confidence, and the last one was social conformity. The first 2 zones of environmental enhancement and social competition each of which consists of 4 items, and the last 4 zones of attention-seeking, mood modification, self-confidence, and subjective conformity each consists of 3 items. The total scale consists of twenty items. Response to each item by participants was scored on a five point Likert scale (1–strongly disagree; 2–disagree; 3–neither agree nor disagree; 4–agree; and 5–strongly agree). The total scores ranged from 20 to 100. The behavior was categorized into 3 categories mild, moderate, and severe selfitis with scores ranging from 20–40, 40–60, 60–80, and 80–100, respectively. Internal consistency coefficient was calculated to be .92 for the SBS total score. An Arabic version of the scale was used in the current study as it was translated and validated by the face and construct validity of the scale was verified by presenting it in its initial form to a panel of arbitrators consisting of (12) arbitrators specializing in the fields of: mental health, psychological counseling, and computer science and on a survey sample consisting of 50 male and female students from outside the sample. The translation was conducted in two stages. In the first stage, the scale was translated into Arabic. In the second stage, it was tested among university studies to assess the reliability and internal consistency of the Arabic version. The initial translation into Arabic was performed independently by two bilingual native speakers from Iraq, both are official translation centers. They were assisted by the researcher if they had any questions about the scale’s content. The two translators combined the translations into a consensus version based on the original scale. The common translated/adapted version was then back

translated into English by two bilingual different official translators.

Rosenberg Self-Esteem Measures the scale is consist of 10 items (questions), there are four choice to answer each question starts from strongly agree, agree, disagree and ends with strongly disagree<sup>[13]</sup>. Each answer has different scores. Normally, the scores is 4 if the answer is strongly agree, The scores is 3 if the answer is agree, the scores is 2 if the answer is disagree and the scores is 1 if the answer is strongly disagree. These questions include both positive and negative feelings about the self. Positive items are 1, 3, 4, 7 and 10 while negative items are 2, 5, 6, 8 and 9. Therefore, the scores for negative feelings are inversely counted. Scores on the Rosenberg Self-Esteem Scale range from 0 to 30, with higher scores indicating higher self-esteem, and scores below 15 typically suggesting low self-esteem. The RSE demonstrates a Guttman scale coefficient of reproducibility of .92, indicating excellent internal

### Findings and Results

Table 1 shows that average age for adolescents with substance use disorder is  $21.7 \pm 3.108$  year, in which 68.5% of them are with age group of 21-23 year. The gender variable refers to male among 70.7% of students while female students were 29.3%. The marital status refers that majority of students are still unmarried as

consistency. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability.

After filling out the questionnaires by the students, the data were analyzed using the 24<sup>th</sup> version of software and descriptive indexes (mean, median, standard deviation, skewness, and kurtosis) were used. Also, for correlation, to test the research question, a suitable statistical test such as simple linear regression was used.

### Ethical considerations

When the permission was confirmed, and ethics committee approval the researcher was allowed to conduct study. The college students were told that they might choose not to participate in the study. The researchers gave an explanation of the study's goal. To protect the participants' identities, they were given an anonymous questionnaire once they inform consented to take part in the study.

seen among 86% and only 10.8% of students are married. The residency refers that 92.2% of adolescents are resident in urban. The family monthly income shows that 46.8% of students unsatisfied, 34.7 % are somewhat satisfied, while 18.5% of them are satisfied with monthly income. The college specialty clarify that 85.8% of students are studying at scientific colleges while 14.5% of them are studying at humanity colleges.

**Table 1**

*Distribution of Sample according to their Socio-demographic Characteristics*

List	Characteristics	N	%
1	Age (Years)	18 – 20	31.5
		21 – 23	68.5
	<b>M±SD= 21.7 ± 3.108</b>	<b>Total</b>	<b>100</b>
2	Sex	Male	70.7
		Female	29.3
		<b>Total</b>	<b>100</b>
3	Marital status	Married	10.8
		Unmarried	86
		Separated/ Widow	2.1
		Divorce	1.1
		<b>Total</b>	<b>100</b>
4	Residence	Urban	92.2
		Suburban	5.6
		Rural	2.2
		<b>Total</b>	<b>100</b>
5	Family monthly income	Satisfied	18.5
		Somewhat satisfied	34.7
		Un satisfied	46.8
		<b>Total</b>	<b>100</b>
6	College type	Scientific	85.8
		Humanitarian	14.2
		<b>Total</b>	<b>100</b>

7	<b>How many times take selfie per day? (n=331)</b>	Once	228	61.2
		Twice	40	10.8
		Thrice and more	104	27.5
8	<b>Reasons to take selfies. (n=331)</b>	Show a better picture of myself	144	45.7
		To increase my self-confidence	64	17.2
		To attract other people's attention to me	123	37.1

*N: Number, %: Percentage*

For selfie time/day, more than 61.2% of students took one selfie/day, while 10.8% took twice selfie/day and 27.5% took three or more selfies/day. In regard reasons to take selfies, 45.7% of students "Show a better picture

of myself", 17.2 %of students "To increase my self-confidence", and 37.1% "To attract other people's attention to me".

**Table 2**

*Assessment of students in' selfie taking behavior (n=372)*

selfie taking behavior	N	%	M	SD
Mild	66	17.7	59.5	14.26
Moderate	240	64.6		
Severe	66	17.7		
Total	372	100		

*N: Number, Frequency %: Percentage*

Table 2 shows that 64.6% of university students had moderate selfie taking behavior, 17.7% had mild

selfie taking behavior, and 17.7% had severe selfie-taking behavior.

**Table 3**

*Assessment of students in self-esteem (n=372)*

Self-esteem	N	%	M	SD
Low (0-15)	51	13.7	20.6	4.39
Normal (15-25)	276	74.2		
High (26-30)	75	12.1		
Total	372	100		

*N: Number, %: Percentage*

Table 3 indicates that more than half of university students are associated with normal self-esteem as seen among 74.2% of them.

**Table 4**

*The Effect of Selfie taking behavior on Self-esteem (N=372)*

Variables	Un standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Selfie taking behavior	-.054-	.016	-.176-	-3.439-	.001

*Dependant variable: self-esteem*

The simple linear regression test in this table indicates that Selfie taking behavior has a significant predictor negative effect on students' self-esteem at p-

value = 0.001. These results suggest that taking selfies could result in greater self-esteem of selfie takers.



**Table 5***Significant Differences in Selfie taking behavior with regard to Students' Gender (n=372)*

Variable	Gender	Independent t-test		t	df	P	Sig.
		M	SD				
Selfie taking behavior	Male	58.91	13.344	-1.414-	370	.006	S
	Female	61.21	16.234				

*M: Mean, SD: Standard deviation, t: t-test, df: Degree of freedom, Sig: Significance, p: Probability value, N.S: Not significant, H.S: High significant*

Table 5 depicts that there is a significant difference in Selfie taking behavior level with regard to female students with p-value =  $\leq 0.05$ .

**Table 6***Significant Differences in Selfie taking behavior with regard to Students' college type (n=372)*

Variable	College type	Independent t-test		t	df	P	Sig.
		M	SD				
Selfie taking behavior	Scientific	58.72	14.244	-2.696-	359	.728	NS
	Humanitarian	65.00	13.771				

*M: Mean, SD: Standard deviation, t: t-test, df: Degree of freedom, Sig: Significance, p: Probability value, N.S: Not significant, H.S: High significant*

Table 6 depicts that there is non-significant difference in Selfie taking behavior level with regard to college type at p-value =  $\leq 0.05$ .

## Discussion and Conclusion

Selfie taking is considered a pleasurable activity by selfie users. Mostly teens and young people are adherents to personal images because through this process they get a kind of fun. Regarding of the total percent of selfie, this study findings showed that almost two third of the studied students had moderate selfie taking behavior, whereas less than fifth of them had chronic selfie addiction and only a minority of them had borderline selfie behavior. This might be due to that the selfie don't have a harmful effect on the study sample.

According to the study's findings, shows that 64.6% of university students had moderate selfie taking behavior while mild and severe selfie taking behavior which consist 17.7%. Hamed, Ali and Abdel Tawab who found that 60.5% of nursing students were female, and 67.4% of the studied sample had a moderate level of selfie-taking behavior (Aly Hamed et al., 2022).

In regard to self-esteem assessment that the majority of participants (74.2%) were categorized as having normal self-esteem, with 12.1% exhibiting high self-esteem and 13.7% exhibiting low self-esteem.

The finding of the current study is coming along with study of Kaur, Dogra and kumar who found that the majority (91.4) of nursing student have normal self-esteem (Kaur et al., 2021).

The simple linear regression test in this table indicates that Selfie taking behavior has a significant predictor negative effect on students' self-esteem at p-value = 0.001. Based on a study conducted on a nursing student in India by Shajan and others who reported various levels of selfitis impact;" 3% had mild impact of selfitis on self- concept, 87% had moderate impact of selfitis on self-concept and 10% had severe impact of selfitis on self-concept. That (87%) of student experiencing moderate impact of selfitis"(Thomas & Shaji, 2022). Mohamed and Abdel Karim conducted a descriptive study in 2019 on the effect of selfitis on self-esteem, body image, and academic achievement among 137 nursing students (Mohamed & Karim, 2019). In spite of moderate level of Selfie taking behavior and normal level self- esteem among college students, the findings showed significant negative effect of Selfie taking behavior suggested those with low self-esteem tend take more selfie to promote self- esteem.

According to differences in selfie taking behavior with regard to gender, the current findings reveal that there is

a significant difference in Selfie taking behavior level with regard to female students at  $p\text{-value} = .001$ . The finding of the current study is coming along with study of Al-Omari and Al-Momani who found there are a significant differences between males and females in the level of self-portrait (selfie) (Al-Jarrah & Alrabee, 2020). Based on the findings aforementioned female participants' self-esteem is somewhat correlated into selfie behavior. When a person feels good about their selves there are possible instances that taking selfie or posting a selfie would occur. This is because the person wants other people's opinion or view to be the same as to what the person feels about himself. In contrast with study findings of (Digamon et al., 2020) who found that there are no differences between males and females in (selfie) and in self-esteem (Digamon et al., 2020).

In regard to differences in selfie taking behavior and college type (scientific and humanitarian) which represent not significant difference in selfie-taking behavior between the two groups, from the point of view of the researchers the students' photo-taking behavior does not differ depending on the type of study. In other words, the photo-taking behavior is the same among students, whether the field of education is scientific or humanistic. The widespread use of social media: All students, regardless of their major, use smart phones and social media that promote taking and posting selfies, making this behavior common among them regardless of academic major.

There are several limitations to this study. A self-report questionnaire was used to collect data, which includes bias. This study was confined to a four governmental university in Baghdad, Iraq, and cannot be generalized to other universities in, so further research is still needed in this area. Based on the finding of the study, students can identify that taking selfie have an impact towards their self-esteem. The researchers presented this research finding as a reference for long-term analysis of selfie behavior in other settings and it is important for mental health professionals to explore how the individual uses selfies as an important part of a mental health assessment.

This research was conducted to investigate the level of selfie taking behavior and self-esteem among college students. The study revealed that 64.6% of participants were moderately selfie taking behavior and normal self-esteem 74.4%. The result also found that selfie taking

behavior predictive effect on self-esteem among college students.

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### Declaration of Interest

The authors of this article declared no conflict of interest.

### Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

### Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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### Authors' Contributions

All authors equally contribute to this study.

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