

Selfie and Narcissism: Investigating the relationship between Selfie-Taking and Narcissistic Personality Traits. A Quantitative Study of Undergraduate Students in Peshawar, Khyber Pakhtunkhwa, Pakistan

Nazima Khan ^a Nimra Javed ^b Tabassum Faiz Solehria ^c  Mehar Bano ^d

Abstract: The current study was conducted to identify the relationship between selfies and narcissism and the impact of narcissism on selfie-taking and posting behavior. It also attempts to find out gender differences in these two variables among the undergraduate students of Peshawar. Narcissism is defined as an exaggerated sense of one's own importance and lack of empathy towards others. Selfies are defined as photographs of yourself that you click with smart phone. The age range of the sample was 18–25. Simple random sampling was used, a sample of 200 (100 males and 100 females) from five private universities in Peshawar was selected. The Narcissistic personality inventory (NPI) and a demographic and informed consent sheet were administered. Statistical analysis through Pearson correlation revealed that there is a significant relationship between selfies and regression analysis revealed that narcissism has a confirmed impact on selfie behavior. Through the *t*-test, it was elaborated that male students are higher in both selfies and narcissism. The results of the study supported the proposed hypotheses. Future researchers may explore the impact of spirituality, religiosity, and mental health issues on selfie behavior and narcissism. Additionally, investigating effective therapies for individuals severely affected by narcissism related to selfie-taking is recommended.

Keywords: Selfies, Narcissism, Undergraduate Students, NPI-16

Introduction

The 21st century is labeled as the technological revolutionary era, where technology has become an essential component of our lives. Gadgets and technology create facilities in life but on the contrary, they bring havoc in life. As science and technology sprout rapidly, the way of living of a person becomes extra cursory, artificial, and tangled. The one indication of this modern technological era is that life is repulsed by connecting yourself with people through different networking sites like social media associations. This association on the one side brings much more association among people of the whole world and makes the world a computer world where socialism becomes much more accessible and uncomplicated and faster, but the very other feature is that it brings more fictitious, materialistic tendencies and promotion in the moods of current civilization (Saleem et al., 2023).

The rise of the selfie phenomenon in 2013 is widely seen as an example of narcissism encouraged by social media. Such individuals use pictures to boost themselves on social media, receive compliments from others, and nourish their apparent inflated self-view. A study conducted by Reyes et al. (2021) addressed if narcissistic personality traits predict selfie-taking behavior among chosen men and women Filipinos. Analysis revealed that narcissism and the behavior of selfie have a statistically significant correlation with narcissism predicting approximately 7.3% of selfie behavior. Filipino men seem to be more narcissistic

^a Undergraduate Scholar, Department of Psychology, Fazaia College of Education for Women, Peshawar, Khyber Pakhtunkhwa, Pakistan.

^b Clinical Psychologist, DA Haq Awaz Anti-Drugs Welfare Organization, Peshawar, Khyber Pakhtunkhwa, Pakistan.

^c Assistant Professor, Department of Teacher Education, Qurtuba University Peshawar, Khyber Pakhtunkhwa, Pakistan.

^d Head of Department, Department of Psychology, Fazaia College of Education for Women, Peshawar, Khyber Pakhtunkhwa, Pakistan.

than their women, while there was no difference between men and women who were involved in selfie behavior in the current study's Filipino participants. Finally, the two variables were not moderated by gender (Reyes et al., [2021](#)).

Narcissism

The history of narcissism could be drawn back in history when River and Nype's son Narcissus was informed not to look at himself if he wanted to live long. But narcissus when saw his own reflection in the water, fell in love with his own reflection in water coming from spring and killed himself. The above is the first example from history showing that self-obsession and self-love are destructive. The declaration of narcissism en route eager on psychoanalysis on the way to assign self-love, pertaining to the Greek falsification of Narcissus. Narcissus fell in love with his own reflection seen in the spring water. He thought that was another being, even though it was his own reflection in the water (Quinodoz, 2010 [Quinodoz](#)).

Narcissism is defined as, *"Excessive focus on self or self-love and lack of empathy for others or egocentrism"*. (Henschke & Sedlmeier, [2023](#)).

The word narcissism comes from clinical description which was coined by Paul Nücke ([1899](#)) to describe the behavior of a person who views his own body in the same way in which the body of a sexual object is seen who looks at it, pampers it and fondles it till he is completely satisfied through these activities. When it reaches this level, narcissism has the significance of a distortion that has consumed the entire of subject's sexual life, and it will therefore display the traits that we anticipate to meet within the analysis of all perversions (Freud, [1914](#)). In this way American Psychological Association (APA) defines Narcissism according to psychoanalytic theory as "Using of one's own ego or body as a sexual object or focusing one's libido on oneself, or choosing a partner for relational purposes based on how similar one is to oneself" (APA Dictionary of Psychology, 2023). Buffardi & Campbell ([2008](#)) noticed how narcissism is displayed on social networking sites, centered on the online behaviors and things people share. It recommends that narcissistic individuals are likely to be involved more in self-promotion and have more online interconnection but do not definitely provide more self-explanation. Their study also highlights the role of specific content elements in shaping insight into narcissistic traits and talks about the inferences of narcissism in online social networking sites (Buffardi & Campbell, [2008](#)).

Likewise, Mehdizadeh ([2010](#)) study found a connection between narcissism and self-esteem on Facebook. People who have more narcissistic tendencies and are lower in self-esteem are usually involved in more online activities and display self-promotional content on their social media profiles. Additionally, they found the impact of gender on self-promotional content posted by Facebook users. Their findings provide awareness of how personal traits can form behavior on social networking platforms (Mehdizadeh, [2010](#)). It is not necessary to have narcissistic behaviors or tendencies to have a narcissistic personality disorder. According to the Diagnostic and Statistical Manual (DSM-5), a person to have narcissistic personality disorder must display at least 55% of the most common clinical symptoms of narcissism. This proves the reality of 'healthy narcissism'. Most of the people exhibit narcissism even in the absence of the disorder. In fact, healthy narcissism is a separate category and is positive (Moore & Hallett, [2023](#)). Additionally, intentions that reflected body positivity and confidence in self might be mistaken for narcissistic ones.

Selfie

Smartphones have encroached into our lives so much that without them a person cannot live. Selfies have become extremely popular, especially on social media sites, where users share their photos with friends, family, and followers. Before sharing photos online various filters and editing software are used to edit and enhance their appearance. Though selfies are often connected with casual and private photography, they are also used for more serious motives, such as recording experiences, directing self-expression, and even as a tool for self-empowerment. The worldwide adoption of smartphones with high-quality cameras built into them has added to the cultural phenomenon of taking and sharing photos as selfies.

Selfie was officially defined by Oxford English Dictionary in 2013 as, “Selfie is a photograph of yourself that you click, commonly with a phone/ webcam”. The interest of Selfie comes from how easy they are to click and share with others.

Selfie is a general term used for a self-portrait, and has become popular among young people of this 21st century. People enjoy taking and posting selfies even when they are in difficult situations or uncomfortable surroundings. For instance, when someone is in an accident, people choose to take photos, instead of calling for help. The study revealed that 67% of the students slightly using selfies and 50% of the students were narcissistic of the chosen population. Narcissism had a significant correlation with selfies. According to this study majority of the college students who edited selfies before uploading them were narcissistic (Sakthivel & Thangamuthu, 2019). Selfies have become an essential part of our lifestyle. Anyone who has a smartphone with a camera has clicked selfies at least once in their lifetime. The fascinating factor which is acclaimed and studied by many researchers is that people these days particularly the ones using social media platforms are not stopping by uploading just one selfie. The type of selfie one takes and likes can tell a lot about that person's personality and character traits (Qiu et al., 2015). Keenan discussed the commonality of charming selfies at social gatherings, and during tutorial groups at the same time including eating, working at the gymnasium, furthermore roughly all over the place and anywhere. It's very common and she said that it's an art of taking photographs of one's own face (Keenan, 2014). A lot of selfies are taken per day. By the third quarter of 2023, Snapchat, a photo and video-sharing app had 406 million daily active users globally, up from 397 million DAU in the second quarter of 2023.

Problem Statement

The present study was conducted to investigate the relationship between selfies and Narcissism in undergraduate students of Peshawar (Peshawar University, National University of modern languages, Iqra University, City University and Islamia University) pointing to understand the possible impact of narcissism on selfie taking behavior in the targeted population.

Objectives of the Study

The main objectives of the study were:

1. To find out the relationship between selfies and narcissism.
2. To find out the impact of narcissism on selfie-taking and posting behavior among the undergraduate students of Peshawar.
3. To determine whether male students exhibit high levels of selfie and narcissistic behavior as compared to female undergraduate students.

Hypotheses

The following hypotheses were formulated for the study:

H1: There is a significant correlation between selfies and narcissism among undergraduate students.

H2: There is an impact of narcissism on selfie-taking and selfie-posting behavior in the undergraduate students of Peshawar.

H3: Male students exhibit a high level of selfie and narcissistic behavior as compared to female students.

H0: There is no significant relationship between selfies and narcissism.

Significance of the Study

The present study may offer an understanding for instructors and institutions in Peshawar on how to address self-esteem and narcissistic tendencies among undergraduate students. Stated the global prevalence of social media and selfies, this study can contribute to the comprehensive discussion on the latest social and psychological trends and may help researchers and society to better recognize the impact of modern technology on human behavior. By exploring the potential relationship between selfies and narcissism, this study can raise sensibility among the public about the impact of excessive selfie-taking

behavior and narcissism on one's self-concept and psychological well-being. It may also help specify patterns of behavior and attitudes among undergraduate students. The findings from this research may have practical applications, such as conveying educational programs, social media campaigns, or psychosocial interventions. It suggests the need for educational drives that promote healthier online behaviors and self-esteem among these students.

Operational Definitions

Selfie

Selfies are defined as personal photos of oneself that are taken with a smartphone or camera, usually for uploading and sharing them on social sites (Sorokowski et al., [2015](#))

Narcissism

The term narcissism in this study refers to the traits or behaviors that are linked to narcissistic tendencies, such as the constant need for attention, obsessive attention to one's appearance, an exaggerated sense of one's own importance, and a lack of concern for the opinions or feelings of others (Ames et al., [2006](#)).

Methodology

Research Design

This study is a Quantitative type of study because it uses numerical data to be measured and analyzed in order to determine how variables (selfies and narcissism) are related to one another. A correlational research design was used, in this design without changing or manipulating the variables, researchers looked into the statistical relationship between two or more variables. Here, the variables are narcissism and selfies, and the researchers probably gather information on each to look for trends or relationships between the two. The independent variable is narcissism, whereas the dependent variable is selfie.

Population and Sample

Population

The population of the study were all undergraduate students at the private universities of Peshawar.

Sample

A simple random sampling technique was used for the selection of samples from five universities in Peshawar. The total sample size was 200 undergraduate students. The data was collected from 100 male and 100 female students, with ages ranging from 18 to 25 years.

Research Instrument

The Narcissism Personality Inventory (NPI-16) of Daniel R. Ames, Paul Rose & Cameron P. Anderson ([2006](#)) consists of 16 items with close-ended questions with 2 options A and B scoring from 0 to 1, was used. The scale has eight forward-scoring items (2, 5, 7, 9, 10, 12, 13, 15) and eight reverse-scoring items (1, 3, 4, 6, 8, 11, 14, 16). The NPI-16 had a α of 0.72. Participants with a score of 8 and NPI-16 value 0.5 or more have behavior and narcissistic traits (Ames et al. 2006). The Narcissism Personality Inventory (NPI-16) is the shorter version of NPI-40 (Raskin & Terry, [1988](#)).

Data Analysis

The data was tabulated, and appropriate analysis was done by using the latest version of SPSS (26). An analysis of descriptive statistics, which includes the demographic characteristics was conducted, percentages were determined.

Additionally, a Pearson product-moment correlation was performed to investigate the relationship between narcissism and selfies. Linear regression was used to find out the impact of narcissism on selfie behavior. Furthermore, an independent sample t-test was utilized to examine gender differences in selfies and narcissism among the students.

Table 1
Demographic Characteristics of the Participants

Demographics	n	%
Gender		
Male	100	50
Female	100	50
Age		
18-19	59	29.5
20-21	65	32.5
22-23	42	21.0
24-25	34	17.0

Table 1 revealed the demographic characteristics of the participants. The table shows equal number of participants, i.e., 100 males (50%) and 100 females (50%). The data revealed that 59(29.5%) participants belong to the age group 18-19, 65 (32.5%) to the age group 20-21, 42(21%) to the age group 22-23 and 34 (17%) participants belongs to age group 24-25.

Table 2
Psychometric Properties for Scale

Scale	M	SD	Range	Cronbach α
NPI	7.40	2.96	14	.616

Note: M=mean, SD= standard deviation, NPI=narcissism personality inventory

Table 2 shows the psychometric properties of the scale in the present study. The Cronbach's α value for the Narcissism personality inventory is .616 which indicates moderate internal consistency.

Table 3
Correlation between Narcissism Personality Inventory, Selfie Taking and Posting Behavior

Variables	n	M	SD	1	2
1. NPI	200	7.40	2.96	-	.852**
2. Selfie taking	200	2.61	.901	.852**	-

** $p < .01$

Table 3 revealed that narcissism has a significant positive correlation with selfie-taking behavior ($r = .852$, $p < .01$).

Table 4

Variables	n	M	SD	1	2
1. NPI	200	7.40	2.96	-	.724**
2. Selfie posting	200	2.04	.907	.724**	-

** $p < .01$

The above table revealed that narcissism has a significant positive correlation with selfie-posting behavior ($r = .724$, $p < .01$).

Table 5
Mean Difference between Two Groups on the Narcissism Personality Inventory (NPI), Selfie Taking and Selfie Posting Behavior

Variables	Female		Male		t(198)	p	Cohen's d
	M	SD	M	SD			
NPI	6.46	2.66	8.34	2.94	-4.71	.000	0.85
ST	2.33	.829	2.89	.886	-2.76	.000	0.65
SP	1.83	.888	2.25	.880	-3.36	.001	0.47

Note: NPI=Narcissism personality inventory, ST=Selfie taking, SP=Selfie posting

Table 5 revealed significant mean differences in NPI with $t(198) = -4.71, p(.000) < .001$. Findings showed that male participants ($M=8.34, SD=2.94$) exhibited higher scores than female participants ($M=6.46, SD=2.66$). With a Cohen's d value of 0.85, it revealed a large effect size.

Findings revealed a significant mean difference in selfie-taking with $t(198) = -2.76, p(.000) < .001$. Findings showed that male participants ($M=2.89, SD=.886$) exhibited higher scores than female participants ($M=2.33, SD=.829$). With a Cohen's d value of 0.65, it revealed a medium effect size.

It also showed a significant mean difference in selfie posting behavior with $t(198) = -3.36, p(.001) < .01$. Findings showed that male participants ($M=2.25, SD=.880$) exhibited higher scores than female participants ($M=1.83, SD=.888$). With a Cohen's d value of 0.47, it revealed a medium effect size.

Table 6

Regression Coefficients of Narcissism on Selfie-Taking

Variable	B	β	SE
Constant	.684***		.090
Narcissism	.260***	.85	.011
R^2	.72		

Note: SE= standard error. $N=200$. *** $p < .001$

Table 6 shows the impact of narcissism on selfie-taking behavior. The R^2 value of .72 revealed the predictor variable(narcissism) explained 72% variances in the outcome variable (selfie-taking) with $F(1, 198) = 526.2, p < .001$. The findings revealed that narcissism has a significant impact on selfie-taking ($\beta = .85, p < .001$).

Table 7

Regression Coefficients of Narcissism on Selfie Posting

Variable	B	β	SE
Constant	.392***		.120
Narcissism	.222***	.724	.015
R^2	.52		

Note. $N=200$. *** $p < .001$

The above table shows the impact of narcissism on selfie-posting behavior. The R^2 value of .52 revealed the predictor variable(narcissism) explained 52% variances in the outcome variable (selfie-taking) with $F(1, 198) = 218.3, p < .001$. The findings revealed that narcissism has a significant impact on selfie posting ($\beta = .724, p < .001$).

Discussion

The present study was conducted to investigate the relationship between selfies and narcissism. Moreover, the study aimed to investigate gender differences that whether males exhibiting higher levels of selfies and narcissistic behavior or female undergraduate students of Peshawar. The total number of participants was 200, including 100 males and 100 females. They were all from age ranging 18–25. Hence, the statistical analysis has proven that the relationship between the variables is significant. Similarly, males score higher in both selfie and narcissistic behavior.

The initial hypothesis meant to observe an association between selfies and narcissism. The findings indicate that there is a significant correlation between narcissism and selfie behavior i.e. $p < .01$ for both. The outcomes align with the conclusion of earlier studies that established a notable correlation between selfies and narcissism. It has been shown in their research that the correlation between narcissism and social media usage which is selfie taking and posting is significant (Bhachech, 2021; Halpern et al., 2016). Another study conducted on young people found that the number of selfies taken on a typical day and the editing of selfies before posting or uploading them had a high correlation with narcissistic traits. At p level

<0.05, Facebook photo uploading had a strong correlation with narcissism. This research found that college students who click selfies more displayed signs of narcissism. It was obvious that the majority of college students who were clicking selfies with their phones and posting them on social networking sites specifically on WhatsApp after editing them had more narcissism-like symptoms (Maheshwari & Preksha, 2018). It was found that narcissism encourages taking and posting selfies and selfish behavior in individuals (Wickel, 2015), especially among young people (Bhachech, 2021). Furthermore, there are certain motivations like communication, attention seeking, and archival as well as narcissistic tendencies that significantly predict selfie posting and taking behavior and frequency (Sung et al., 2016).

The second hypothesis was that there is a significant impact of narcissism on selfie-taking and selfie-posting behavior. Regression analysis revealed that there is a significant impact of narcissism on selfie-taking ($R^2 = .72$) and posting behavior ($R^2 = .52$). Which means that narcissistic individual tends to engage more in selfie-taking and posting behavior for attention-seeking purposes than nonnarcissists. Our findings are consistent with the results of some previously done research they looked at the contemporary, widely accepted popularly cultural trend "selfies" or self-taken pictures posted and shared on social platforms, considering the favorable relationship that has been founded between narcissism and personalized kind of digital media usage. It has provided strong evidence that narcissism strongly predicts involvement in selfie behaviors and narcissist individuals click selfies more frequently over time (Arpaci et al., 2018; Fox & Rooney, 2015; Halpern et al., 2016). Results from another group of researchers which support our results, found that narcissism significantly predicts selfie behavior among adolescents. This suggests that individuals with narcissistic tendencies may engage in selfie-taking and posting behavior more frequently to seek attention (Umar et al., 2023). This hypothesis is also supported by the Impression management theory of Goffman which says that people use different strategies to use selfies to present an idealized version of themselves to the audience for attention-seeking and self-praise which in turn makes them happy.

The third hypothesis of this study states that men exhibit higher narcissism and selfie behavior than women. From the analysis of data, it has been proven that men exhibit higher in both variables. Our results are supported by numerous research like a meta-analytical review by Grijalva et al. (2015) found that men scored higher in narcissism than women. Similarly, Sorokowski et al. (2015) suggested that narcissistic men post selfies more in order to seek social approval and validation. Fox and Rooney (2015) also found that men high in narcissism were more likely to edit their social media photos (i.e., cropping, using filters, using photo editing software). It has been found that Narcissistic behavior has a positive significant correlation with selfie-posting behavior only for men but not for women. Moreover, both genders have different behavioral patterns in using social networking sites (SNS) (Arpaci, 2018). As narcissism plays a vital role in selfie-related behavior. Halpern et al. (2016) conducted a study to understand whether narcissists take more selfies than non-narcissists. Results revealed that narcissists tend to take more selfies than non-narcissists. It also revealed that the act of taking selfies enhances narcissistic tendencies, especially in men than women. (Halpern et al., 2016). Agency, dominance, and desire to succeed are the characteristics of narcissism. In addition, narcissists are less caring than those who are non-narcissistic. As the agentic trait is a strong and obvious representative of men, so, men are more agentic than women. This implies that men are more narcissistic than women (Seidman, 2023). Men by nature and genetically are dominant and show leadership and agentic qualities. For these types of approvals, they develop pathological or secondary narcissism which is characterized by arrogance, a persistent need for praise, and neglect for the needs of others. (Sigmund Freud, "On Narcissism," 1914 | the Autism History Project, 2019). For this purpose, they try to manage their online impression and click more selfies to post them. Since, all of the three hypotheses are proved, and null hypothesis is rejected.

Conclusion

The present study aimed to investigate the relationship between selfies and narcissism and the impact of narcissism on selfie frequency among the undergraduate students of Peshawar. The study also anticipated that men exhibit higher levels of selfie and narcissistic tendencies. A total number of participants was 200; 100 men and 100 women. Data was collected from 5 universities of Peshawar and 20 students were taken

from each university. On the basis of analysis, the study has covered gender differences along with the relationship between selfies and narcissism as well as the impact of narcissism on selfie taking and posting behavior. Findings revealed similar trends to previous research that there is a significant relation between the variables and narcissism positively impacts selfie taking and posting behavior. Participants who reported high narcissism tend to click and post more selfies. It is also found that men exhibit higher levels of narcissism and selfie behavior than women because of their dominant nature as stated by previous research. Overall, the study shed light on the significant impact and relationship between the study variables in undergraduate students. The findings have clinical implications because they clearly show the need for a broader focus on oneself, and policymakers and educational institutes should work on it to avoid any harmful impact on the personality of an individual.

Limitations

Limitations of the present study are given below:

1. The study is conducted in Peshawar, with its unique cultural and social dynamics, this limits the generalizability of the research findings to undergraduate students in other regions or countries with different culture regarding selfies and narcissism.
2. Men are more pressurized to exhibit confidence and assertiveness traits which is often associated with narcissism. Taking selfies could be a way for men to assert their presence and status in social circles especially in Pashtoon culture.
3. Cultural values like privacy and modesty, especially for women, can impact how often they take and post selfies. Women are often more restricted in expressing themselves through selfies due to cultural expectations of modesty and privacy, possibly leading to fewer selfies and lower levels of observed narcissism.

Recommendations

Following is the recommendation of the study on the basis of findings:

1. Future researchers may include a more diverse sample, keeping in view variables such as socioeconomic status, birth order, parenting styles, and geographic location to enhance the generalizability.
2. It is recommended to conduct comparative studies between different cultures that can shed light on how cultural norms, values and traditions influence the relationship between selfies and narcissism.
3. It is recommended to investigate the impact of spirituality and religiosity on selfie-taking and posting frequency along with narcissism.

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