Social Media Use, Covert Narcissism, and Depressive Symptoms among Nursing Students.

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Abstract

Background: Students today are preoccupied with social media usage for various purposes and actions. Abuse of social media platforms may be detrimental to a student's mental health. **Aim of the study:** To investigate the association between social media use, covert narcissism, and depressive symptoms among nursing students. **Subjects and Method: Research design:** A descriptive correlational design was adopted to carry out this study. **Setting:** The study was conducted at the Faculty of Nursing Zagazig, University Egypt. **Subjects**: A simple random sample of 255 nursing students was recruited for this research. **Tools of data collection:** Three tools were used for data collection. **Tool (I):** Social Media Use Integration Scale. **Tool (II):** Beck Depression Inventory. **Tool (III):** Hypersensitive Narcissism Scale. In addition to the socio-demographic characteristics sheet. **Results:** They indicated that less than half of the studied students' overused social media, while about one-sixth of them had a covert narcissistic behavior, and more than half of them suffered from moderate depressive symptoms. Students' social media use was found to be highly statistically significantly positively correlated with depressive symptoms, and covert narcissism, and it was significantly positively correlated with students' age and academic year. As well, students' depressive symptoms were discovered to be highly statistically significantly positively correlated with covert narcissism, students' age, and academic year. **Conclusion:** It was proven that all variables were positively correlated with one another, where overusing social media is associated with increased depressive symptoms and covert narcissism among nursing students. **Recommendations:** Organize seminars and initiatives to raise awareness about the benefits and cons of social media use. Further research is needed to investigate the effects of social media use on psychological well-being and educational programs for university students who are prone to Facebook addiction and covert narcissism.

Key words: Social media use, covert narcissism, depressive symptoms, and nursing students.

Introduction

The word "social media" implies computer-mediated interactive platforms that facilitate the development or exchange of information, thoughts, career ambitions, and other kinds of expression utilizing virtual societies and networks [(1)]. Moreover, social media is an interactive web technology that is growing in popularity all around the world. Facebook, LinkedIn, Snapchat, Twitter, and Instagram were the most popular social media platforms globally [(2)]. They are utilized by billions of people worldwide and have rapidly become today's most important technologies [(3)]. Over 3.6 billion individuals used social media globally in 2020, with that figure predicted to rise to approximately 4.41 billion by 2025[(4)].

In the education sector, applying social media technology for learning is highly desirable, with the majority of university students reporting that it is difficult to quit utilizing social media sites to enhance their learning [(5)]. As a result, a majority of students spend endless hours per day on social networking sites such as WhatsApp, YouTube, Facebook, Instagram, Twitter and others [(6)].

On the other hand, narcissism is described as entitlement, self-absorption, self-importance, grandiose expectations of oneself, and a desire for self-enhancement [(7)]. Narcissism is classified into two types: overt and covert. The overt type, classified as grandiosity, is characterized by an exaggerated sense of self-importance and a desire for attention. Covert or vulnerability narcissism, on the other

hand, includes hypersensitivity to criticism, a lack of self-esteem, and being isolated; hidden narcissism also includes grandiosity, as in overt narcissism [8].

Being a narcissist, one enjoys shallow relations, and social media enables its users to form such worthless friendships with people of different colors, gender, nationality, and so on. Social networking sites also allow people to generate user profiles that project themselves in the way they desire, and it typically attracts users with narcissistic traits [9]. At the same time, from its origin as a psychiatric term, narcissism has been conceptually connected with depression. Covert narcissism is a more unstable self-concept construct than overt narcissism, and it has been related to depressive tendencies toward self-criticism and a depressive temperament in nonclinical samples [10].

Furthermore, depression is stated as a mood condition that is distinguished by grief, lack of interest or enjoyment, feelings of guilt or low self-esteem, interrupted sleep or eating, feelings of fatigue, and impaired concentration [11]. Also, depression is one of the most significant mental health issues in the world, particularly among young individuals. More than 264 million people are affected by depression, according to the World Health Organization (WHO). Every year, over 800,000 individuals commit suicide, and suicide is the second most widespread reason for death among young people aged 15 to 29 [12].

Depression is common among nursing students at the university stage due to the numerous stressors they confront during their studies, resulting in physical and psychological health issues as well as low academic achievement [13]. Due to the intensive nature of their teaching and training program, nursing students need to use the internet and social media websites daily that provide health information to

seek new understanding, which might lead to them spending more time on social media and experiencing social isolation, sleep disturbance, poor concentration, and low level of self-esteem, placing them at the strong likelihood of developing depression [14].

Additionally, unwarranted and compulsive use of social media has been shown to influence users' personality traits [15]. Therefore, some persons who use media are seen to have a social media addiction, with a narcissistic personality character and self-admiration behaviors [16]. Social media has an impact on its users because people share selfies and photographs, and others applaud them by commenting on their photos and posts, recent research suggested that it has elevated narcissism. People desire to be appreciated and complimented by others. They consider themselves unique and enjoy living in a world of fantasy. People who desire to be applauded by others or who feel unique to others become more conceited and haughty [17].

Significance of the Study:

It is critical to investigate the association between nursing students' use of social media, covert narcissism, and depression because the epidemic coronavirus illness (COVID-19) made nursing students rely on social networking sites for learning, they devote more time to those programs, which exposes them to a high level of social isolation. Furthermore, because of negative life events connected with coronavirus infection, intense academic stress, and social isolation, there is a high chance of depressive symptoms such as despair, exhaustion, rage, and hopelessness [18]. Similarly, scientists and journalists have suggested that users' narcissism is linked to the popularity of social networking sites, and social networking behavior indicates narcissistic traits [19]. To better understand how narcissism affects interpersonal conduct, researchers must look into the relationship

between narcissism and social networking sites. Examining these relationships is extremely crucial because differing activities on social networking sites might have real-life consequences [20]. Besides, understanding the effect of social media on university students' psychology will help doctors and researchers understand the causative factors of depression that plague university students [21]. Additionally, there have been few studies on the association between social media use, covert narcissism, and depression among nursing students.

Aim of the study:

The aim of the study was to investigate the association between social media use, covert narcissism, and depressive symptoms among nursing students.

Research questions:

- Are there depressive symptoms among nursing students?
- Is there covert narcissism among nursing students?
- What is the level of social media abuse by nursing students?
- What is the association between social media abuse, covert narcissism, and depression among nursing students?

Subjects and Methods:

Research design:

A descriptive correlational design was used.

Study setting:

The study was carried out at the Faculty of Nursing, Zagazig University, in Al-Sharkia Governorate, Egypt.

Study subjects:

A simple random sample of 255 undergraduate students from four academic years was recruited for this research. The overall number of students in the Faculty of Nursing, Zagazig University is 3875. Percent of severe depression was 26 % [22]. The Confidence level is 95% with a power of study of 80%. Epi info version 6.02 was used to calculate the sample size. The study sample inclusion criteria

included nursing students of both gender from all academic years who voluntarily accepted to participate and complete the questionnaires.

Students included in the study distributed regarding popular allocation

Academic grade	No of students	Sample
1	875	58
2	1600	105
3	840	55
4	560	37

Tools for data collection:

In order to fulfill the objectives of the study three tools were used to collect necessary data:

Tool 1: Social Media Use Integration Scale (SMUIS): The tool was developed by Maree et al., [23]. It is a self-administered scale used to assess the level of students' social media usage and includes items such as "I feel detached from friends when I have not log in into social media", and "Social media plays a vital role in my social relationships".

Scoring system: The SMUIS consists of ten items, one of which is conversely scored. Responses are ranked on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree), the total score was calculated and ranged between 10-50 categories. A score of 10 indicates minimal use, 11-20 indicates mild use, 21-30 indicates moderate use, 31-40 indicates high use, and 41-50 indicates overuse.

Tool II: Beck Depression Inventory Scale (BDIS) :It is a self-reported depression questionnaire which assesses depression intensity in normal and psychiatric individuals. The tool was developed by Beck et al., [24].

Scoring system: The tool includes 21 items on a 4-point Likert scale ranging from 0 (no symptoms) to 3 (severe symptoms). Because all of the scale's items are positive, there is no need for reverse scoring. The overall score was 84, with 0-10 indicating normal ups and downs, 11-

16 indicating a mild mood disturbance, 17-20 indicating borderline clinical depression, 21-30 indicating moderate depression, 31-40 indicating severe depression, and over 40 indicating extreme depression.

Tool III: Hypersensitive Narcissism Scale (HSNS):The Hypersensitive Narcissism Scale was designed by Hendin and Cheek [25]. It is a self-report scale used to assess covert narcissism and includes items such as "I feel that I am temperamentally different from most people", and " I often interpret the remarks of others in a personal way".

Scoring system: The HSNS consists of ten items, and responses are assessed on a 5-point likert scale that ranges from 1 (Very uncharacteristic or untrue, strongly disagree) to 5 (Very characteristic or true, strongly agree), with higher scores indicating higher levels of covert narcissism. The total score was calculated and ranged between 10-50 categories. A score of 10-≤36 is considered to haven't narcissism, and 36-50 is considered to have covert narcissism.

Content Validity and Reliability:

A panel of three experts from academic staff in Psychiatric Nursing and Statistics revised the content validity of the tools used in this study for clarity, applicability, relevance, understanding, comprehensiveness, and ease of implementation. The researchers translated the tools into Arabic using the translation-back translation method to ensure the original validity of the study tools. Tools were tested for their reliability using Cronbach's alpha. The values were revealed as follows: Social Media Use Integration Scale (0.95), Beck Depression Inventory Scale (0.61), and Hypersensitive Narcissism Scale (0.93).

Field work:

After explaining the study aims and objectives to the recruited group of nursing students / at their classrooms, the researcher conducted interviews to obtain verbal consent. The chosen 255 students were distributed into six groups (35 to 40 students for each group). During interviews students received explanation for each question before being asked to complete the questionnaire . Each group took about 30 to 45 minutes to complete it. The data were collected during around three months, from March 10 to June 12, 2022.

Pilot study:

A pilot study was conducted on 25 (10 %) of students to ensure the clarity, objectivity and comprehensiveness of the tool, and to estimate the time needed to fill in the tools. These students were excluded from the total number of the main study sample. Required modifications were performed on the tools final version.

Administrative and Ethical considerations:

In order to obtain approval to carry out the study, the researchers provided an official letter to the Scientific Research Ethics Committee in the Faculty of Nursing, Zagazig University. After being informed of the study's objectives, subjects who were interested in participating signed a written informed consent form, acknowledging that they could leave the study at any time and without giving any cause and that the data they provided would be treated confidentiality and used only for research purposes.

Statistical Analysis:

The IBM Corp. was used to collect, compile, evaluate and statistically analyze all data. Reproduced in 2015. Version 23.0 of IBM the Statistical Package for Social Science (SPSS), Statistics for Windows. IBM Corp., Armonk and New York. The mean and standard deviation were used to express quantitative data, and qualitative information was presented as a number and Percentage. The Chi-

square test was used to compare categorical variable percentages. To evaluate the relationship between different study variables, the Pearson correlation coefficient was calculated. The (+) and (-) signs indicate direct correlation and inverse correlation, respectively. Values close to 1 indicate strong correlation, while values close to 0 indicate weak correlation. To describe data and explain the relationship between one continuous dependent variable and one or more independent variables, multiple linear regressions are used. Every test had two sides. P values < 0.05 were regarded as statistically significant, those ≥ 0.05 as statistically insignificant, and < 0.0001 regarded a highly statistically significant.

Results:

Table (1): Shows that more than three-quarters (77.3%) of the studied students aged 19 or more with a mean age of 19.3±0.97, and the majority of studied students (83.5%) were females. Concerning the study participants' residence, more than three-quarters (76.1%) were from rural areas, and more than two-fifths (41.2%) were in their second academic year**.**

Table (2): Reveals that more than two-fifths(41.6%) of studied students overused social media with a mean score of 33.8±10.9, more than tenth of students (14.5%) had covert narcissism with a mean score of 28±6.5, and less than three fifths of the students (58.0%) had moderate depressive symptoms, with a mean of 20.3±8.2.

Table (3): Demonstrates the existence of a highly statistically significant association between nursing students using social media and their age (p=0.0001). Additionally, the table reveals that there was a highly statistically significant association between nursing students using social media and their academic year (p=0.0001) as more than half of students (59.0%) in their second year

overused social media, while, more than half of students (56.9%)in their first year were mildly used social media.

Table (4): Clarifies that there was a highly statistically significant association between the depression score of nursing students and their age (p=0.0001), as two-thirds of students aged 19 or more (69.5%) have moderate depression. The same table reveals that there was a statistically significant association between the depression score of nursing students and their gender (p=0.0001), as more than half of female students (59.6%) have moderate depression. Concerning academic year, the table shows that there was a highly statistically significant association between the depression score of nursing students and their academic year (p=0.0001).

Table (5): Shows that there was a statistically significant association between nursing students' narcissism score and their age (p<0.05).As well, the same table reveals that there was a statistically significant association between nursing students' covert narcissism score and their residence (p<0.05), as rural students had covert narcissism more than urban students(17.5%&4.9%,respectively).Concerning academic years, the same table shows that there was a highly statistically significant association between nursing students' narcissism score and their academic year (p=0.003), as about one-quarter (23.8%) of nursing students in their second year had narcissism**.**

Table (6): Points out that, there were highly statistically significant positive correlations between students' social media use scale and each student's depression, and covert narcissism, and significantly positively correlated with the student's age, and academic year. This table also displays that students' depression was highly statistically significantly positively correlated with

narcissism, students' age, and academic year.

Table (7): Clarifies that highly statistically significant predictors of students' depression scores were social media use score, narcissistic score, and academic year (p=0.0001).

Table (8): Indicates that social media use and depression scores were highly statistically significant predictors of covert narcissism scores.

Discussion:

The popularity of social media is developing every day, notably during the COVID-19 lockdown [26, 27]. However, excessive social media use is developing a lifestyle addiction that is causing a variety of psychological and social disorders such as despair, anxiety, isolation, low self-esteem, and ineffective social interaction [28]. The concept of narcissism is the desire to be noticed or to be liked. People who use social media sites desire to connect with other social media users. A preceding research has established a relationship between social media addiction and narcissism [29].

The objective of this study was to investigate the association between social media use, covert narcissism, and depressive symptoms among nursing students. The findings generally answered the research questions.

According to the current study results, nursing students had an average age of 19.3±0.97 with a range of 18-21 years, and the majority of studied students were females. These results might be attributed to an increasing number of female students at the Faculty of Nursing at all four years of education. This finding was consistent with those of a previous study carried out by Lee et al., [30] which found that the majority of participants (91.4%) were females and 98.1% of them were younger than 25 years.

The current scientific study concluded that slightly more than two fifths of nursing students were overused of social networking sites,

about one-quarter were classified as high users, and only a few users were classified as moderate users. This finding might be explained by the fact that the majority of nursing students who took part in the current study are youthful, ranging in age from 18 to 21 years, and this category is considered to be among the most active users of social media platforms compared to other age groups. Another potential reason for this finding is that the majority of nursing students at this faculty are unable to quit utilizing social media which help them in their learning, and the presence of the COVID-19 issue has made nursing students reliant on such online learning tools.

The previous findings are consistent with those of a study conducted in Bengal, India by Barman et al., [31] and another study carried out in Saudi Arabia by Alsabaani et al., [32] as well as a study conducted alone in Pakistan by Ahmad et al., [33] all of them discovered that medical students use social media platforms more than other students in different fields of study.

The current study demonstrated that there was a statistically significant relationship between the age of nursing students and their use of social media which means that social media use increased with advancing age. This could be due to that students are spending more time per day on social media due to an increase in the general objectives of utilizing social media with increasing age as a person's social circle expands. A nearly similar finding was supported by Murat et al.,[34], who revealed that the low social media addiction among teens aged 14 increases with age up to 17 years, whereas it lowers in the 18-year-old group.

Additionally, the current study result demonstrates that there was a statistically significant relationship between the academic year of nursing students and their use of social media as almost three fifths of students in the

second year overused social media, while, more than half of students in the first year mildly used social media.This may be due to that the academic purposes of using social media at the first year are still less than that of the students of other higher academic years. On the other hand, increasing academic demands in the second year may be a factor. A similar finding was detected by Sutherland et al., [35], who indicated that later-year students use social media more frequently than first-year students to interact in their university communities.

Regarding the score of narcissism among nursing students, the current research indicated that about more than tenth of studied students had a covert narcissistic behavior with a mean score of 28±6.5. This could be owing to developmental challenges throughout the adolescent-to-adult transition stage. It may also be higher among nursing students due to inflated grade point averages in high schools as a result of the College of Nursing's high coordination, which allows them to believe they are better than they are.

Similar results were detected by Santana, et al [36] and Teva et al, [37] which reported in a very recent study that a wide range of narcissistic estimates (0.0%–14.7%).Incongruent with the previous studies, the study conducted by Jogia and Gurganib [38] revealed that more than half of students had moderate narcissism, almost one-quarter had extreme narcissism, and approximately one-sixth had mild narcissism.

The current study findings showed that there was a statistically significant relationship between the narcissism score of nursing students and their age. It might be due to the narcissism being more common in young adults due to developmental challenges throughout the adolescent-to-adult transition period. A nearly similar finding was found in an American study done by Weidmann et al., [39], who demonstrated that narcissism increased significantly from 14 to 18 years old and then decreased slightly but not significantly from 18 to 23 years old.

As well, the present study result demonstrated that there was a statistically significant relationship between nursing students' narcissism score and their residence. This could be explained by the society encouraging more aggression, impulsivity, and self-contentedness among rural pupils than in urban ones. This finding conflicts with those of a previous study performed by Rossier et al., [40],and those of a recent study done by Jogia and Gurganib [38] who displays that there were no significant relationships between the narcissism and demographic characteristics analyzed, which included a race, socioeconomic status, as well as residence.

Regarding academic year, the current research showed that there was a statistically significant relationship between nursing students' narcissism score and their academic year, as more than half of nursing students that characteristic with narcissism were in the second academic year. This could be due to the success in the previous year which tended to make the students feel good about themselves as they measure their success by promotions, financial achievements, or possessions, but not by happiness.This result was consistent with that of the research done by Cavusoglu et al., [41], which revealed that there were noticeable differences between the year of study and the entitlement sub-dimension .

Concerning scores of depression among nursing students, the results of this study indicate that more than half of the studied nursing students having moderate depression. This could be due to that those students, who study nursing being vulnerable to additional stress and strain because they must devote a lot of time to studying and seeking new information, which can lead to the

social feeling of isolation and sadness. On the same line, a Pakistani study done by Ahmad et al., [33] and a German study done by Brailovskaia and Margraf [42] reported that depression is more widespread among medical students than among other students with a different specialization.

Further, the result of the current study showed that there was a highly statistically significant association between nursing students' depression score and their age, as more than two-thirds of students aged 19 or more have moderate depression. This could be because the change from being a student to almost being a nursing specialist has a significant impact on their psychological health. Nearly similar findings were detected in a study conducted by Lin et al., [43] who found that the participants aged 27-32 had a higher percentage of "high" depression (38.7%) than participants aged 19-23 (28.8%) and 24-26 (32.5%).

As well, the current study result demonstrates that there was a statistically significant relationship between nursing students' depression score and their gender, as slightly less than three fifths of female students has moderate depression. Possible explanations include social comparison, feedback asking, reassurance desiring, and female attractiveness sensitivities. Other factors included the familial environment, negative childhood experiences, social and cultural rules, and the higher susceptibility of females because of mood significantly reducing, rumination, and inactivity compared to males who tend to divert their attention by participating in physical or social activities when feeling nervous or depressed. This study was approved by Islam et al, [44] who showed that female students were depressed more than male students, although the difference was not statistically significant.

Concerning academic year, the current study result displays that there

was a highly statistically significant association between nursing students' depression score and their academic year, as nearly three-quarters of students in the fourth year have moderate depression. This could be due to academic demands, highly competent peers, and notable variations across nursing education schools in that final year as the students spend the majority of the academic year as interns in the clinical setting. Similar to this finding, a Malaysian study conducted by Islam et al., [44] showed a statistically significant association between depression among university students and year of education.

The current study revealed that a highly positive and statistically significant correlation exists between students' use of social media and their level of depression. This finding may be attributed to the nursing students who spend too many hours a day on social media becoming more lonesome and struggling to build relationships with others, developing insomnia or sleep difficulties, life dissatisfaction, emotional exhaustion, and impairment of physical and psychological well-being. Another factor contributing to this outcome could be that the study subjects viewed time spent looking on social media to be "wasting," which could have a negative impact on their mood.

In this respect, the previous finding of the present study is confirmed by Wong et al.,[45] and Wolniewicz et al.,[46] who concluded that the participants who use social media more frequently have a higher chance of developing depression. However, the outcome of the present study contradicted with those of Alsabaani et al., [32] and Shensa et al., [47] who concluded that there was no relation between using social media more frequently and experiencing depressive symptoms.

In the current study, a highly statistically significant positive correlation was reported between

students' social media use and students' narcissism. This may be interpreted as social media platforms, particularly Facebook and Instagram, are focusing on sharing one's image and opinions; young adults who frequently use these platforms are prone to narcissism because they encourage young people to focus obsessively on their own and public image. Additionally, because narcissism is the delusional fantasy that a person is better than he is, anything allows this false idea to grow is looking for the growth and prosperity of narcissism, such as social media, which allows a person to create a false image of himself to reach fame, get attention, and imitating famous persons to increase the number of friends and followers on social networks and gain likes.

The previous finding of the current study is similar to that of a study conducted by Jogia and Gurganib [38], which showed that there was a significant correlation between usage of social media and narcissism scores, which indicates that higher social network usage elevates narcissism. On the same line, the study conducted by Malik and Khan [28] investigated that Facebook over-usage was positively correlated with Narcissism.

The current study finding revealed that there was a highly statistically significant positive correlation between students' narcissism and depression. This implies that there is only one possible result of depression in those with high levels of covert narcissism is the automatic application of shame-centered coping techniques like self-criticism or withdrawal. Because covert narcissists are more likely than non-narcissists to experience shame in social contexts, they may employ powerful shame-related defense mechanisms, such as self-criticism or withdrawal to safeguard themselves from the pain of damage to their self-esteem. This study finding was consistent with that of Gu and Hyun [48], who concluded that covert narcissism was found to have a significant positive correlation with depressive symptoms.

The present study results demonstrated that the highly statistically significant predictors of students' depression scores were social media using scores, narcissistic scores, and academic years. Similar to these findings is that of the study conducted by Şar & Türk-Kurtça [49], which revealed that narcissistic vulnerability was a predictor of depression in students. In addition, Malik and Khan [28] reported that Facebook addiction was found to be a major predictor of narcissistic behavior and low self-esteem. However, incongruent to these findings, the study conducted by Franco and Carrier [50], which discovered that email use is the only statistically significant predictor of depression, while other social networking apps do not predict depression levels.

Finally, multivariate linear regression reported that the social media use and depression scores were highly statistically significantly predictors of covert narcissism scores. This may be related to that the students who spend the majority of their time on Facebook have low self-esteem, and may unintentionally, engage in even more significant narcissistic behavior to compensate. Similar to this finding is that of the study conducted by Malik and Khan [28], who revealed that Facebook addiction was determined to be a significant predictor of narcissistic traits. The findings of the current study are also in agreement with that of the study performed by Akça et al., [51], which reported that the overall Facebook usage positively predicts narcissism.

Conclusion:

The current study findings concluded that nursing students in Zagazig University were having a moderate level of social media abuse, depressive symptoms, and a minority of covert narcissism. All these

variables were positively correlated with one another, whereas overusing social media was associated with increased depressive symptoms and covert narcissism. Students' social media over use scores, narcissistic scores and academic years were highly statistical significant predictors of depression scores, while predictors of students' narcissism scores were social media overuse scores and depression scores.

Recommendations:

Based on the current study findings, the following recommendations are suggested:

1. Establish an academic atmosphere that provides routine assessments of depression of nursing students.
2. Organize seminars and initiatives to raise awareness about the benefits and cons of social media use.
3. Educational programs for university students who are prone to Facebook addiction and narcissism.
4. Further research is needed to look into the consequences of social media use on mental health.

Table (1): Socio-demographic Characteristics of the Studied Nursing Students (n=255).

Variables		NO	%
Age	<19	58	22.
	≥19	197	77.3
	Mean ±SD	19.3±0.97	
	Median(range)	19(18-21)	
Gender	Male	42	16.5
	Female	213	83.5
Residence	Urban	61	23.9
	Rural	194	76.1
Academic year	First	58	22.7
	Second	105	41.2
	Third	55	21.6
	Fourth	37	14.5

Table (2): Frequency Distribution of Social Media Use Score, Narcissistic Score, and Depression Score among Studied Nursing Students (n=255).

Variables	Level	No	%	Mean ± SD
Social media use	Mild	67	26.3	
	moderate	17	6.6	
	High	65	25.5	33.8±10.9
	overuse	106	41.6	
Narcissism	Characteristic(yes)	37	14.5	
	Uncharacteristic(n0o)	218	85.5	28±6.5
Depression	No	55	21.6	
	Mild	41	16.1	
	Border Line	11	4.3	20.3±8.2
	Moderate	148	58.0	

Table (3): Relation between Nursing Students' Social Media Using Score and their Demographic Characters (n=255).

Variables		Social media using score of nursing students				χ^2	p
		Mild No (%)	Moderate No (%)	Sever No (%)	Overuse No (%)		
Age group	<19	33(56.9)	6(10.3)	7(12.1)	12(20.7)	40.9	0.0001*
	≥19	35(17.8)	10(5.1)	58(29.4)	94(47.7)		
Gender	Male	8(19.0)	0(0.0)	14(33.3)	20(47.6)	5.9	0.12
	Female	60(28.2)	16(7.5)	51(23.9)	86(40.4)		
Residence	Urban	15(24.6)	6(9.8)	18(29.5)	22(36.1)	2.8	0.42
	Rural	53(27.3)	10(5.2)	47(24.2)	84(43.3)		
Academic year	First	33(56.9)	6(10.3)	7(12.1)	12(20.7)	63.4	0.0001*
	Second	6(5.7)	6(5.7)	31(29.5)	62(59)		
	Third	19(34.5)	3(5.5)	18(32.7)	15(27.3)		
	Fourth	10(27)	1(2.7)	9(24.3)	17(45.9)		

Insignificant p ≥0.05, * Significant p < 0.05,** Highly significant p <0.001

Table (4): Relation between Nursing Students' Depression Score and their Demographic Characters (n=255).

Variables		Depression score of nursing students				χ^2	p
		No No (%)	Mild No (%)	Border line No (%)	Moderate No (%)		
Age group	<19	17(29.3)	26(44.8)	4(6.9)	11(19.0)	61.5	0.0001*
	≥19	38(19.3)	15(7.6)	7(3.6)	137(69.5)		
Gender	male	8(19)	13(31)	0(0.0)	21(50.0)	9.7	0.02*
	female	47(22.1)	28(13.1)	11(5.2)	127(59.6)		
residence	urban	18(29.5)	12(19.7)	2(3.3)	29(47.5)	4.7	0.19
	rural	37(19.1)	29(14.9)	9(4.6)	119(61.3)		
Academic year	first	17(29.3)	26(44.8)	4(6.9)	11(19.0)	66.7	0.0001*
	second	23(21.9)	5(4.8)	2(1.9)	75(71.4)		
	third	8(14.5)	8(14.8)	4(7.3)	35(63.6)		
	fourth	7(18.9)	2(5.4)	1(2.7)	27(73.0)		

Insignificant p ≥0.05, * Significant p < 0.05,** Highly significant p <0.001

Table (5):   Relation between Nursing Students' Narcissism and their Demographic Characters (n=255).

Variables		Narcissism score of nursing students		χ^2	p
		Yes	No		
Age group	<19	3(5.2)	55(94.8)	5.3	0.022*
	≥19	34(17.3)	163(82.7)		
Gender	male	6(14.3)	36(85.7)	0.002	0.96
	Female	31(14.6)	182(85.4)		
Residence	urban	3(4.9)	58(95.1)	5.9	0.015*
	rural	34(17.5)	160(82.5)		
Academic year	First	3(5.2)	55(94.8)	13.7	0.003*
	Second	25(23.8)	80(76.2)		
	Third	4(7.3)	51(92.7)		
	Fourth	5(13.5)	32(86.5)		

Insignificant p ≥0.05, * Significant p < 0.05,** Highly significant p <0.001

Table (6): Correlation Matrix Between Nursing Students' Social Media Use, Depression, Narcissism, Students' Age, and Academic Year (n=255).

Variables		Social media using score	Depression score	Narcissistic score
Social media using score	r	1		
	p			
Depression score	r	.613**	1	
	p	.0001		
Narcissistic score	r	.628**	.630**	1
	p	.0001	.0001	
Students' age	r	.137*	.304**	.063
	p	.029	.0001	.313
Academic year	r	.14*	.297**	0.067
	p	.023	.0001	.286

r correlation coefficient; *p < 0.05 significant, **p <0.01 highly significant

Table (7):   Multivariate Linear Regression for Predictors of Nursing Students' Depression (n=255).

Predictors	β	Std. Error	t	Sig.	R	R²
(Constant)	7.06					
Social media using score	.258	.043	6.038	.0001		
Narcissistic score	.515	.071	7.199	.0001	0.73	0.54
Gender (males)	-2.104	.968	-2.174	.031		
Academic year	1.992	.368	5.420	.0001		

Dependent variable: Depressive symptoms score
ANOVA: f=72, p=0.0001 (Social media using score, narcissistic score, and academic year predict depressive symptoms score).

Table (8): Multivariate Linear Regression for Predictors of Nursing Students' Covert Narcissism (n=255).

Predictors	Unstandardized coefficients		t	Sig.	R	R²
	β	Std. Error				
(Constant)	27.405					
Social media using score	0.228	.033	6.869	0.0001		
Depression score	0.325	.046	7.046	0.0001	0.71	0.51
Students' age	-0.751	.308	2.438	0.015		
Residence "rural"	1.133	.676	1.676	0.095		

Dependent variable: Narcissistic score
ANOVA: f=65, p=0.0001 (Social media using score, and depression score predict covert narcissism score).

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