

Social Media as a Danger to Mental Health: The Relationship Between Social Media Use and Anxiety Among Selected College Students

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DOI: <https://doi.org/10.52403/ijrr.20221165>

ABSTRACT

In 2022, the Philippines ranked second on the list of nations whose citizens spend the most time on the internet and social media. A growing number of studies have found that social media use is positively associated with anxiety. This study sought to verify this among a selected group of college students. An equal number of male and female volunteers from a university in Manila and who are social media users were the participants of this study. The Social Media Engagement Scale for Adolescents and the GAD-7 test by Pfizer were administered among the respondents. The findings revealed a low positive relationship between social media use and anxiety.

Keywords: social media, social media engagement scale, anxiety, GAD-7

INTRODUCTION

According to a digital report in 2022, internet users in the Philippines between the ages of 16 to 64 spent an average of 10 hours and 27 minutes linked to the internet daily inside the last 12 months. Because of this, it was found that the Philippines ranked second on the list of nations whose citizens spend the most time on the internet and social media.¹

Internet access and usage has reached 68% of the total Philippine population at the beginning of 2022. The number of internet users increased by 2.1 million from 2021 and 2022.²

Social media has become the focus of a growing number of mental health concerns in teenagers. An increasing number of studies are establishing a clear connection between young adults' social media use and symptoms of anxiety and depression. This is impacted by the very high smartphone use among young adult populations, which indicates that social media and smartphones play an integral role in the routines and culture of young adults.³

One study on adolescents classified social media usage into time spent, activity, investment and addiction. It was found that all domains correlated with depression, anxiety and psychological distress.⁴

Another study found that more time spent on social media was significantly associated with more symptoms of dispositional anxiety. In addition, daily social media engagement was significantly associated with greater chances of individuals scoring above the anxiety severity clinical cut-off which could lead to a probable anxiety disorder.⁵

Numerous social media platforms abound and internet users are likely to try many of them. A study revealed that individuals who used 7-11 social media platforms had considerably greater odds of possessing increased levels of depression and anxiety symptoms.⁶

Another study attempted to distinguish between active and passive social media

use. Passive social media use was found to be related to adolescent symptoms of anxiety and depression. Passive social media use was more strongly connected to symptoms of depression among girls. Furthermore, time spent on social media had a stronger relationship with emotional distress among girls.⁷

In a study conducted in Hungary, addiction to social media use was found to be more prevalent in the at-risk group, which reported low self-esteem and high level of depression symptoms.⁸

The lockdowns, consequent social isolation and uncertainty brought about by the COVID-19 pandemic may have exacerbated the already problematic effects of social media use. In a study conducted in Spain, social media usage as a source of information during the beginning of the COVID-19 pandemic was found to be positively linked to anxiety and burden experienced by users.⁹

This study attempted to verify the relationship between social media use and anxiety among a selected number of respondents in the Philippines. Volunteer respondents who are social media users were asked to answer the Social Media Engagement Scale for Adolescents¹⁰ and the GAD-7 test by Pfizer¹¹.

Specifically, it sought to answer the following research questions:

1. What are the levels of social media use of the male and female respondents as measured by the Social Media Engagement Scale for Adolescents?
2. What are the levels of anxiety of the male and female respondents as measured by the Pfizer's GAD-7 questionnaire?
3. Is there a significant difference in the levels of social media use between the male and female respondents?
4. Is there a significant difference in the levels of anxiety between the male and female respondents?
5. Is there a relationship between social media use and anxiety among the male respondents?
6. Is there a relationship between social media use and anxiety among the female respondents?
7. Is there a relationship between social media use and anxiety among the all the respondents combined?
8. Is there a relationship between age and social media use among the respondents combined?
9. Is there a relationship between age and anxiety among the respondents combined?

METHODOLOGY

From a government university in the City of Manila, an equal number of male and female college students were invited to participate in this study. 37 males and 37 females who were social media users volunteered to become respondents. Their identities were not acquired but their informed consent was obtained. The age range of the respondents was from 17 to 25. The Social Media Engagement Scale for Adolescents¹⁰, which consists of 10 items and uses a 5-point Likert scale was used to measure the respondents' social media usage.

The GAD-7 is a seven-item, self-report anxiety questionnaire intended to evaluate the patient's health status during the previous 2 weeks. The following is the scale of interpretation used in the GAD-7 score: 0 to 4 = mild anxiety, 5 to 9 = moderate anxiety, 10 to 14 = moderately severe anxiety and 15 to 21 = severe anxiety.¹¹ Developed by Spitzer, Pfizer announced that this questionnaire can be freely used for research purposes.¹² Both instruments were administered on the respondents online using Google Forms.

RESULTS

Table 1: Difference in Social Media Use between Males and Females

Independent T-test of Social Media Use between Males and Females		
Group	Males	Females
Mean	35.65	35.38
SD	8.61	6.79
SEM	1.41	1.12
N	37	37
P value and statistical significance: The two-tailed P value equals 0.8812 By conventional criteria, this difference is considered to be not statistically significant . Confidence interval: The mean of Males minus Females equals 0.27 95% confidence interval of this difference: From -3.32 to 3.86 Intermediate values used in calculations: t = 0.1500 df = 72 standard error of difference = 1.802		

Table 2: Difference in Anxiety between Males and Females

Independent T-test of GAD between Males and Females		
Group	Males	Females
Mean	9.05	9.16
SD	5.76	5.66
SEM	0.95	0.93
N	37	37
P value and statistical significance: The two-tailed P value equals 0.9353 By conventional criteria, this difference is considered to be not statistically significant . Confidence interval: The mean of Males minus Females equals -0.11 95% confidence interval of this difference: From -2.75 to 2.54 Intermediate values used in calculations: t = 0.0814 df = 72 standard error of difference = 1.327		

Table 3: Relationship Between Social Media Use and Anxiety among Males

Pearson r Social Media Use and GAD: Males	
X Values $\Sigma = 1319$ Mean = 35.649 $\Sigma(X - Mx)^2 = SSx = 2666.432$	X and Y Combined N = 37 $\Sigma(X - Mx)(Y - My) = 71.703$
Y Values $\Sigma = 335$ Mean = 9.054 $\Sigma(Y - My)^2 = SSy = 1193.892$	R Calculation $r = \frac{\Sigma(X - My)(Y - Mx)}{\sqrt{(SSx)(SSy)}}$ $r = 71.703 / \sqrt{(2666.432)(1193.892)} = 0.0402$
r = 0.0402 <i>Very low positive relationship</i>	

Table 4: Relationship Between Social Media Use and Anxiety among Females

Pearson r Social Media Use and GAD: Females	
X Values $\Sigma = 1309$ Mean = 35.378 $\Sigma(X - Mx)^2 = SSx = 1658.703$	X and Y Combined N = 37 $\Sigma(X - Mx)(Y - My) = 352.73$
Y Values $\Sigma = 339$ Mean = 9.162 $\Sigma(Y - My)^2 = SSy = 1153.027$	R Calculation $r = \frac{\Sigma(X - My)(Y - Mx)}{\sqrt{(SSx)(SSy)}}$ $r = 352.73 / \sqrt{(1658.703)(1153.027)} = 0.2551$
r = 0.2551 <i>Low positive relationship</i>	

Table 5: Relationship Between Social Media Use and Anxiety Combined

Pearson r Social Media Use and GAD: Combined	
X Values Σ = 2628 Mean = 35.514 Σ(X - Mx)² = SSx = 4326.486	X and Y Combined N = 74 Σ(X - Mx)(Y - My) = 423.892
Y Values Σ = 674 Mean = 9.108 Σ(Y - My)² = SSy = 2347.135	R Calculation $r = \frac{\sum((X - Mx)(Y - My))}{\sqrt{(SSx)(SSy)}}$ $r = 423.892 / \sqrt{(4326.486)(2347.135)} = 0.133$
r = 0.133 Low positive relationship	

Table 6: Relationship Between Age and Social Media Use

Pearson r Age and Social Media Use	
X Values Σ = 1493 Mean = 20.176 Σ(X - Mx)² = SSx = 208.716	X and Y Combined N = 74 Σ(X - Mx)(Y - My) = -66.676
Y Values Σ = 2628 Mean = 35.514 Σ(Y - My)² = SSy = 4326.486	R Calculation $r = \frac{\sum((X - Mx)(Y - My))}{\sqrt{(SSx)(SSy)}}$ $r = -66.676 / \sqrt{(208.716)(4326.486)} = -0.0702$
r = -0.0702 Very low negative relationship	

Table 7: Relationship Between Age and Anxiety

Pearson r Age and GAD	
X Values Σ = 1493 Mean = 20.176 Σ(X - Mx)² = SSx = 208.716	X and Y Combined N = 74 Σ(X - Mx)(Y - My) = -192.405
Y Values Σ = 674 Mean = 9.108 Σ(Y - My)² = SSy = 2347.135	R Calculation $r = \frac{\sum((X - Mx)(Y - My))}{\sqrt{(SSx)(SSy)}}$ $r = -192.405 / \sqrt{(208.716)(2347.135)} = -0.2749$
r = -0.2749 Low negative relationship	

DISCUSSION

It can be observed in Table 1 that although males yielded a higher mean than females in social media use, this difference was not found to be significant. In Table 2, the female respondents yielded a higher mean than males in anxiety but this difference was found not to be significant.

Table 3 shows the Pearson r computation of the social media usage and anxiety scores of the male respondents. A Pearson r value of 0.0402 was obtained, which indicates a very low positive relationship between social media use and anxiety among males.

Table 4 shows the Pearson r computation of the social media usage and anxiety scores of the female respondents. A Pearson r value of 0.2551 was obtained, which indicates a

low positive relationship between social media use and anxiety among females. This value is much higher than the one yielded by the male respondents.

Table 5 shows the Pearson r computation of the social media usage and anxiety scores of all the respondents combined. A Pearson r value of 0.133 was obtained, which indicates a low positive relationship between social media use and anxiety among all the respondents combined.

Table 6 shows the Pearson r computation between age and social media usage of all the respondents combined. A Pearson r value of -0.0702 was obtained, which indicates a very low negative relationship between age and social media use among all the respondents combined.

Table 7 shows the Pearson r computation between age and anxiety of all the respondents combined. A Pearson r value of -0.2749 was obtained, which indicates a low negative relationship between age and anxiety among all the respondents combined.

CONCLUSIONS

The females showed higher anxiety scores than the males. This finding is consistent with a study that found girls to be more anxious than boys.¹³ In addition, the mean GAD-7 scores of both groups indicate a moderate level of anxiety based on the scale of interpretation.

Although the findings yielded only a low positive relationship between social media use and anxiety among all the respondents combined, this is consistent with the various studies cited herein that social media use is positively associated with anxiety.

It is of interest to note further that a stronger positive relationship between social media use and anxiety was found among the female respondents. This finding merits verification and further investigation as to its reasons.

Age was found to correlate inversely with social media use to a very low extent. Similarly, age was found to correlate inversely with anxiety. Concerning anxiety and age, the findings are consistent with a study that found a steady linear reduction in anxiety across age.¹⁴

To address the anxiety level of the respondents, a study has found that encouraging group exercise participation could be an effective way of battling anxiety for college students.¹⁵

Declaration by Authors

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

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- How to cite this article: Frederick Edward T. Fabella, Mavel B. Lagarde. Social Media as a danger to mental health: the relationship between social media use and anxiety among selected college students. *International Journal of Research and Review*. 2022; 9(11): 496-501. DOI: <https://doi.org/10.52403/ijrr.20221165>
