# INFLUENCE OF INTERNET ADDICTION AND LONELINESS ON PSYCHOLOGICAL WELLBEING AMONG NIGERIA POLICE ACADEMY CADETS

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## ABSTRACT

Being addicted to internet and feelings of loneliness are rapidly becoming prevalent globally mental health concern. This study investigates the effect of internet addiction (IA) and loneliness on psychological wellbeing (PWB) among cadets of Nigeria Police Academy, through an ex post facto survey. A total of 161 cadets (108 males and 53 females) with mean age of 21 years completed the Internet Addiction Test (IAT), University of California, Los Angeles (UCLA) loneliness scale, and Ryff Psychological Wellbeing Scale. Three hypotheses were tested using a two way ANOVA (IBM SPSS 26) analysis. Results show there was no statistically significant interaction effect between IA and loneliness, $F(2, 161) = 0.80$, $p = .45$. There was statistically significant main effects for both IA, $F(2,161) = 6.45$, $p = .002$, with a medium effect size (partial eta squared = 0.08); and loneliness $F(2,161) = 24.05$, $p = .001$, with a large effect size (partial eta squared = 0.13. Post-hoc comparisons using the Tukey HSD test indicated that the mean scores for the low, moderate and high internet addiction groups (M = 96.26, SD = 17.28); (M = 81.46, SD = 13.01); and (M = 89.23, SD = 15.68) were respectively statistically different. The implication of this result is that psychological wellbeing of cadets is affected by both internet addiction and loneliness independently. Recommendations are established on the findings.

*Keywords*: Internet addiction, loneliness, psychological wellbeing, cadets, Nigeria

## INTRODUCTION

The internet has become an integral part of modern life, offering a vast array of opportunities for communication, entertainment, and information. While the internet has brought numerous benefits, it has also raised concerns about the potential negative effects on mental health. Among the concerns is internet addiction, defined as the excessive and uncontrollable use of the internet, often leading to impaired daily functioning and psychological distress (Kuss et al., 2013). University students, who are among the most frequent internet users, may be particularly susceptible to internet addiction (Chen et al., 2018) and consequently represents a worthy research population.

Psychological well-being is defined as being in a positive functioning or mental state such as; happiness, pleasure, satisfaction and reduced distress (Ryff, 1989; Vandenbos, 2015). For students, this positive functioning is required for copping effectively with personal, academic and negative life demands imposed by studentship. Today, internet use has dominated all aspects of students' lives and is considered an important tool for learning and meeting social needs that increase psychological wellbeing. This notwithstanding, current research has moved from merely using internet to maintain relationships, information about on goings with others and society and past time to escape one's worries. The shift is now on how Internet use is implicated in various phenomena such as decreased wellbeing (Odacı & Çikrikci, 2014; Satici & Uysal., 2015; Uysal et al., 2013), anxiety (Brailovskaia & Margraf, 2017) and depression (Błachnio et al., 2015; Appel et al., 2016). This study intends to contribute to the current shift and extend knowledge on how internet addiction and loneliness affect psychological wellbeing of students.

Theoretically, many attempts have been made to explain internet addiction, but we find Davies (2001) cognitive-behavioural model of excessive use appealing as it relates more to this study. According to Davis, excessive internet use should be viewed as a problematic behaviour rather an addiction or disease. He further suggested that excessive internet use does not cause psychosocial difficulties or lead to pathology, but on the contrary, pre-existing psychosocial

difficulties predispose people to develop maladaptive cognitions and behaviours that in turn lead to excessive use (Carli et al., 2013; Lam, 2014). From this perspective, low psychological wellbeing can propel individuals to problematic internet use. Davis also differentiated specific from generalised online behaviours. He argued that certain specific online behaviours, such as stock trading, accessing sexual material, or online gambling, were distinct from generalised online behaviours, whereby an individual is drawn by the experience of the Internet itself and particularly the unique communication platform that it offers.

This study adopts the generalised online behaviour because it is the type that offers online social support that people leverage when they want to socially connect with family and friends. To buttress the importance of this model to aid understanding of the link between problematic internet use and loneliness, Caplan's (2002) found that scores on the Generalised Problematic Internet Use Scale (GPIUS) were correlated with factors of depression, self-esteem, loneliness and social reticence (Caplan, 2003). This assertion agrees with Cutrona's (1982) cognitive process theory, which suggests that the lonely individual has thoughts that prevents him or her from forming satisfying relationships. In his view, though loneliness is an uncomfortable affective experience, it is affected by cognitive factors. Such thoughts and perceptions or values and beliefs influence how we think about relationship as satisfactory or not meeting our expectations (Cutrona, 1982). Though these two theories might serve as a frameworks to guide this study, there are controversies surrounding problematic internet use and the debate is still ongoing.

The researcher opines that loneliness happens when the social connections that people want don't match their actual experience of relationships with others. Therefore preference for online social media could provide a better explanation for those with unmet needs or social skills deficits and away from friends and family to indulge problematic internet use to ameliorate the feelings of loneliness and enhance psychological wellbeing. Since internet use is a behaviour and loneliness is an emotional response, their insights are better drawn from psychology and justifies why this study seek to establish relationship between these variables and psychological wellbeing.

A lot of evidence from the literature suggests a positive relationship between perceived online social support and positive health. However, in a contra view, Bhattarai et al (2021) observe that powerlessness of people to control their use of the internet may lead towards poor psychological outcomes. Similarly, Jehangir and Khalid (2022) in their study suggests that appropriate use of the internet can help foster psychological wellbeing among individuals. While Azher et al (2014) argue that frequent use or internet addiction is becoming the major cause of psychological disturbances among students. These arguments provides insight to the conclusion that the perception of how internet helps in the attainment and maintenance of psychological wellbeing among individuals vary (Hsu et al., 2020). Despite this variation, more evidence tilts to the negative as several studies (Alqahtani et al., 2020; Davis, 2001; Hematababd, 2021; Hussien, 2022; Okwaraji et al., 2015; Young, 1998) acknowledge that preoccupation with internet can cause and threaten the mental health and psychological wellbeing of individuals.

Similarly, Sharma and Sharma (2018), and Bal and Turan (2021) in their recent studies have both established the negative effect of excessive use of internet on psychological wellbeing. From the foregoing research evidence, it is a clear indication that the higher the levels of internet use, the lower the psychological wellbeing of the population studied. In an earlier study Kraut et al (1998) found that excessive internet usage presents a negative effect on face-to-face interactions by reducing time spent with friends and family members, which leads to increased loneliness and depression, thus decreasing psychological well-being. However, he later contradicted the findings when they reported a positive relationship between internet usage and well-being, asserting that greater internet usage leads to better communication and greater social involvement, resulting in an enhanced sense of well-being (Kraut et al., 2002). These previous mixed negative and positive findings between internet addiction and psychological wellbeing

demands further research investigation to unravel and accentuate more evidence to determine which side holds sway.

There is also growing research concerns that feelings of loneliness and social isolation may trigger the need for internet use because of its increased potential for companionship (Hasmujaj, 2016). Liu (2004) for example, reported that internet use increased the degree of loneliness among college students. However, Caba et al (2022) argues that the stimulation hypothesis supports the findings that an increase in the use of social networking systems is a form of online social support. In their opinion, the perception of being more connected via online social support increases well-being and reduce loneliness. Yet some scholars believe that the internet communication divests students' wellbeing because it displaces valuable time that could be spent in physical social interactions (Kraut et al., 1998; Nie, 2001; Nie & Hillygus, 2002). This again creates doubt as to whether or not the recourse to internet actually fulfils the need for companionship, as the real time physical interactions becomes the opportunity cost. So, how does internet use and loneliness interact to affect psychological wellbeing?

There has been evidence linking loneliness and psychological wellbeing. In a study conducted by Mami and Ghanbaran (2014) on undergraduate students, the result showed a significant negative relationship between feelings of loneliness and psychological well-being. In a recent study, Sharifi (2022) notes that loneliness can be observed to negatively affect adolescents' psychological well-being. Studies by Gudmundsdottir (2007) and Holder and Coleman (2009) established the importance of relationships for happiness. They found that high level of loneliness is linked to poor self-esteem and results in diminished psychological wellbeing. Their findings are supported by earlier literature (McWhirter et al., 2002; Prinstein & La Greca, 2002) done with adolescents.

Internet addiction and loneliness are often positively related (Erol & Cirak, 2019; Gill, 2019). For example, Gill (2019) in a study of loneliness in relation to internet addiction among adolescents, found significant positive relationship between loneliness and internet addiction. Students who feel lonely may turn to the internet as a coping mechanism, seeking social interactions online. However, this can exacerbate the problem if such online interactions are not fulfilling, or lead to addictive behaviour. Conversely, excessive internet use can lead to social withdrawal, making students even lonelier. This cyclical movement from loneliness to internet use and back suggest that both factors influence students' wellbeing.

Hsu et al (2020) suggest that the belief that online social support from friends and family can help students who feel isolated from family to buffer the effect of stress and effectively cope with school challenges may be a factor for internet addiction. A study by Jehangir and Khalid (2022) for instance, found that two subscales of perceived online social support - friends, and family, had a significant positive relationship with psychological wellbeing among university students. This led to their conclusion that family and friends are integral to the psychological wellbeing of university students.

Unfortunately, since the current commandant, AIG Sadiq Abubakar assumed office in 2023, cadets of the Nigeria police academy are banned from using phones in the school for months without alternative sources of social contact with family and friends. This action, in the views of Gudmundsdottir (2007) and Holder and Coleman (2009) undermine the importance of relationships in enhancing wellbeing. The social contact deprivation has potential to exacerbate the stress of cadets in a regimented environment, but this could be a good topic for future exploration.

Having acknowledged that the proliferation of internet usage has raised concerns about its impact on mental health, particularly among young adults, and loneliness is another prevalent issue that often coexists with internet addiction; this study explores how these two factors influence the psychological wellbeing of university students. Three hypotheses were formulated to guide the study. These include H1: Internet addiction will significantly affect psychological

wellbeing among police academy cadets; H2: loneliness will significantly affect psychological wellbeing among police academy cadets; and H3: Both internet addiction and loneliness will significantly affect psychological wellbeing among police academy cadets. The study aims to understand how these factors interplay and influence the psychological wellbeing of cadets. To achieve this, the researcher employs a cross-sectional survey.

## METHODS
### Design
A quantitative cross sectional ex post facto survey was adopted to collect data from the cadets. This research design was considered most appropriate because of its cost effectiveness considering the paucity of research grants.

### Participants
A diverse sample of Nigeria Police Academy cadets totalling (N = 161), 108 (67.1%) males and 53 (32.9%) females from various faculties, departments and backgrounds was recruited for this study via a convenience sample. Participants ranged in age from 17 to 26 years old, with a mean age of 21 and standard deviation of 2.37. The sample included only cadets from four faculties, and the highest number of participants were from Social Sciences, 61(37.9%), closely followed by Science, 56 (34.8%). Law faculty had 37 (23%) participants, while faculty Humanities came a distant last with only seven (7) participants (4.3%) to equal a total of 161.

### Instruments
Three standardised instruments were used for this study. These include Internet Addiction Test, UCLA Loneliness Scale, and Psychological Wellbeing Scale.

**Internet Addiction Test (IAT)**: The IAT was used to assess internet addiction (Young, 1998). Participants were asked to rate the extent to which they agreed with statements related to their internet use. A higher score on the IAT is indicative of higher internet addiction and vice versa. The reliability and validity of the IAT were in the acceptable range, which were coefficient of Cronbach alpha coefficient of .90 while Spearman Brown of .86 (Keser et al., 2013). In this study, the Cronbach alpha coefficient was .87.

**UCLA Loneliness Scale**: Loneliness was measured using the UCLA Loneliness Scale (Russell et al., 1980). The scale consists of 20 items assessing feelings of loneliness and social isolation. A higher score indicated a greater level of loneliness and vice versa. The reliability and internal consistency of the scale were reported by Russell (1996) which are Cronbach alpha coefficient of .89 to. 94. As well as test-retest correlation over 12 months period of .73. In this study, a Cronbach alpha coefficient value of .87 was reported.

**Psychological Wellbeing Scale**: Psychological well-being scale developed by (Ryff and Singer, 1998) was used. This 18-item scale measures six dimensions of psychological wellbeing but was used as a composite variable in this study. A higher score on the instrument indicated higher psychological wellbeing and vice versa. Overall internal consistency reliability coefficients were reported by Ryff and Keyes (1995) as being between .83 and .91. In this study, a Cronbach alpha coefficient value of .82 was reported.

### Procedure
The lecture rooms were venues for administration of questionnaires. The fact that this research was meant to serve as an example for the 2022/2023 session research methods course, we did not formally seek to obtain an ethics approval. We told cadets during class that we were carrying

out a study to ascertain how internet use affect psychological wellbeing, and requested those who would like to participate in the study to indicate by show of hand. The show of hand was considered as consent on the part of respondents and the questionnaire was given to them. Participants were notified that they could withdraw at any point in the study as participation in the study was voluntary and didn't attract incentives. After completion of the questionnaires; the participants were debriefed, and thanked for their time. Participation lasted between 5 to 10 min. After the survey, only fully completed questionnaires were subjected to analysis.

## RESULTS

The following section presents all the results generated from data beginning with descriptive to inferential analysis.

Table 1. Summary of means, and standard deviations of variables and number of participants

**Descriptive Statistics**

Dependent Variable: Psychological wellbeing score

| Total internet addiction score (Binned) | New loneliness score (Binned) | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Low | Low | 100.9444 | 16.34616 | 36 |
| | High | 86.8000 | 15.15047 | 20 |
| | **Total** | **95.8929** | **17.20748** | **56** |
| Moderate | Low | 90.2222 | 14.08193 | 18 |
| | High | 77.4103 | 10.36370 | 39 |
| | **Total** | **81.4561** | **13.00696** | **57** |
| High | Low | 93.0000 | 12.93772 | 27 |
| | High | 85.0952 | 17.94131 | 21 |
| | **Total** | **89.5417** | **15.66125** | **48** |
| Total | Low | 95.9136 | 15.32906 | 81 |
| | High | 81.7750 | 14.39055 | 80 |
| | **Total** | **88.8882** | **16.43244** | **161** |

Table 1 above presents the means, standard deviations and number of participants in each group of internet addiction, (Low, Moderate and High) based on the felt loneliness (Low and High). Low internet addiction has a low loneliness mean of 100.94 and SD of 16.35; and a high loneliness mean of 86.80 and SD of 15.15. Moderate internet addiction has a low loneliness mean of 90.22; SD of 14.08 and high loneliness mean of 77.41; SD of 10.36. Finally, at the High internet addiction had a Low loneliness mean of 93.00, SD of 12.93 and High loneliness mean of 81.78 and SD of 14.39. Table 2 below provides results of between-subjects effects.

Table 2. Summary of two-way ANOVA for test of hypotheses

**Tests of Between-Subjects Effects**

Dependent Variable: Psychological wellbeing score

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 11248.542ᵃ | 5 | 2249.708 | 10.912 | .000 | .260 |
| Intercept | 1168132.121 | 1 | 1168132.121 | 5666.029 | .000 | .973 |
| newIA | 2544.672 | 2 | 1272.336 | 6.171 | .003 | .074 |
| Nlone | 4988.298 | 1 | 4988.298 | 24.196 | .000 | .135 |
| newIA * Nlone | 262.196 | 2 | 131.098 | .636 | .531 | .008 |
| Error | 31955.445 | 155 | 206.164 | | | |
| Total | 1315283.000 | 161 | | | | |
| Corrected Total | 43203.988 | 160 | | | | |

a. R Squared = .260 (Adjusted R Squared = .236)  b. Computed using alpha = .05

A two-way between-groups analysis of variance was conducted to explore the effect of internet addiction and loneliness on levels of psychological wellbeing among cadets, as measured by the

Psychological Wellbeing Scale. Participants internet use scores were binned into three levels (Low, Moderate and High), while loneliness was binned at two levels (Low and high) as shown in above table 2. The interaction effect between loneliness and internet use was not statistically significant, $F$ (2, 155) = .64, $p$ = .53. There was a statistically significant main effect for internet addiction, $F$ (2, 155) = 6.17, $p$ = .003; with a medium effect size (partial eta squared = .07). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the moderate internet addiction ($M$ = 81.46, $SD$ = 13.00) was significantly different from both the low internet addiction ($M$ = 95.89, $SD$ = 17.21) and the high internet addiction ($M$ = 89.54, $SD$ = 15.66). The main effect for loneliness, $F$ (1, 155) = 24.20, $p$ = .001, was also statistical significant with a larger effect size (partial eta squared = .14 approximately).

Figure 1 below shows that psychological wellbeing is highest for cadets who are low on both internet addiction and loneliness, and diminishes at moderate and higher levels. This result demonstrate that loneliness does not moderate the relationship between internet addiction and psychological wellbeing. In summary, the ANOVA shows that a significant difference exist between psychological wellbeing scores for cadets who were addicted to internet at low, moderate or high levels. Again, there is a significant difference between psychological wellbeing scores for cadets who were low or high on loneliness. However, there is no significant difference between the interaction effect and outcome of psychological wellbeing.
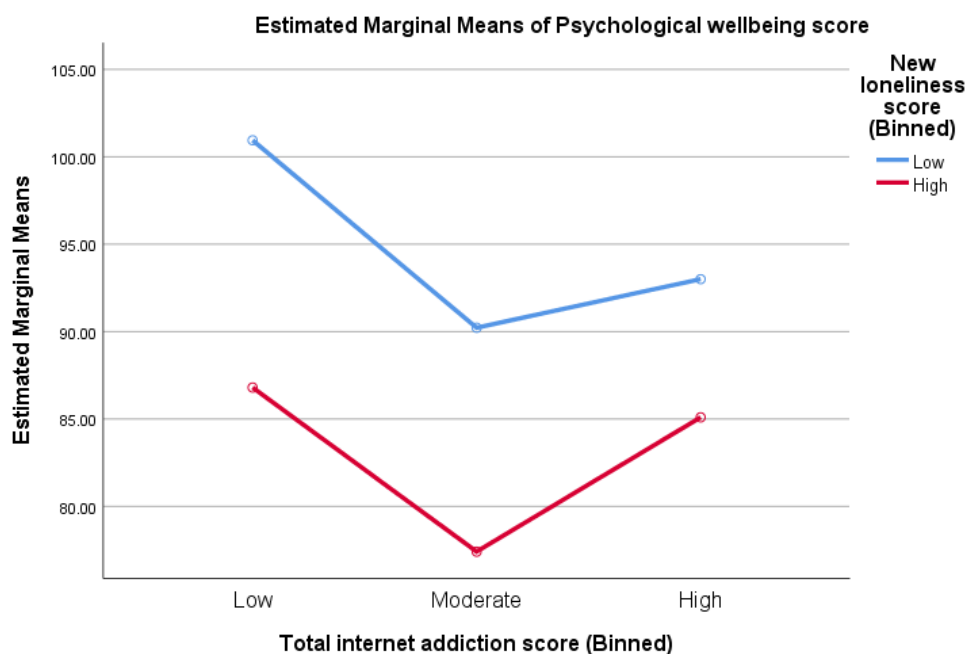


Figure 1. Differences in levels of internet addiction and loneliness, and effect on the psychological wellbeing of cadets

## DISCUSSION AND CONCLUSION

The findings of this study underscore the complex relationship between internet addiction, loneliness, and psychological wellbeing among cadets of Nigeria police Academy Wudil Kano. Internet addiction and loneliness appear to be interconnected, with both independently contributing to diminished psychological wellbeing for the moderate and high internet addiction

levels and those high on loneliness. These results clearly show that high levels of internet addiction and loneliness affect negatively psychological wellbeing.

The implication of this result for the first hypothesis is that psychological wellbeing of cadets is higher only for those at lower level of internet addiction, and the psychological wellbeing is lowest for the moderate internet addiction group. This result shows that there is a significant mean difference between levels of internet addiction reflecting changes in the amount of psychological wellbeing felt by cadets. Hypothesis one which states that internet addiction will significantly affect psychological wellbeing among police academy cadets is accepted. The findings of this study is consistent with those of other studies (Bal & Turan, 2021; Sharma & Sharma, 2018; Odacı & Çikrikci, 2014; Satici & Uysal., 2015; Uysal et al., 2013) which established the negative effect of excessive use of internet on psychological wellbeing, and Bhattarai et al (2021) who observe that powerlessness of people to control their use of the internet is what lead towards poor psychological outcomes. However, the finding contrasts with Jehangir and Khalid's (2022) position that appropriate use of the internet can help foster psychological wellbeing among individuals (Kraut et al., 2002).

Again, result of this study confirms the second hypothesis that loneliness will significantly affect psychological wellbeing among police academy cadets. This finding implies that the higher the levels of loneliness, the lower the psychological wellbeing felt and vice versa. The finding is also consistent with earlier studies (Gudmundsdottir, 2007; Holder & Coleman, 2009; Mami & Ghabaran, 2014; McWhiter et al., 2002; Prinstein & La Greca, 2002 and Sharifi, 2022), which support the thesis that higher levels of loneliness negatively affected psychological wellbeing.

However, the third and final hypothesis which posits that both internet addiction and loneliness will significantly affect psychological wellbeing among police academy cadets was rejected. In other words, there was on interaction effect of internet addiction and loneliness on psychological wellbeing. This indicates that there is no significant difference in the effect of internet addiction on psychological for cadets felt low and high loneliness. In other words, levels of internet addiction did not depend on loneliness to exert its influence on psychological wellbeing.

From this study, it is expected that readers have gained insight about internet use, which has the potential to facilitate on the one hand social connections and to foster psychological wellbeing (Jehangir & Khalid, 2022). On the other hand, it can also engender feelings of loneliness and exacerbate addiction tendencies when used inappropriately (Kraut et al., 1998). With no inhibitory effect on each other, dysfunctional or problematic internet use and loneliness independently influence negatively psychological wellbeing. Again, the study findings have revealed that low or normal levels of internet use and loneliness do not negatively affect psychological wellbeing, but moderate and high levels do.

These results have implications for mental health interventions among university students. Strategies should aim to promote healthier internet usage patterns while addressing feelings of loneliness. Universities can offer programs that educate students about the signs of internet addiction and provide resources for seeking help. Additionally, promoting face-to-face social interactions and teaching healthy online communication skills may mitigate feelings of loneliness and enhance psychological wellbeing.

In conclusion, internet addiction and loneliness are interconnected factors that significantly affect the psychological wellbeing of university students. The results of this research emphasize the need for a holistic approach to addressing these issues. Universities, in collaboration with mental health professionals should develop strategies to promote responsible internet use and provide support for those experiencing loneliness. This approach is deemed more appropriate in enhancing the overall psychological wellbeing of their student populations. Further research is warranted to explore these issues in greater depth and assess the effectiveness of potential interventions.

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