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Knowledge of Internet Addiction and Its Mental Health Consequences Among University Students in the United Kingdom: A Cross-Sectional Study

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ABSTRACT

Background: Internet addiction has emerged as a significant public health concern because of its potential effects on psychological wellbeing, academic performance and social functioning, particularly among university students who rely

extensively on digital technologies for learning and everyday communication. Although considerable attention has been directed towards the prevalence and consequences of problematic internet use, less emphasis has been placed on students' knowledge of internet addiction and their awareness of its implications for mental health. Understanding this knowledge is important for informing preventive interventions and promoting healthier patterns of digital engagement within higher education.

Aim: To assess students' knowledge of internet addiction, including their understanding of its behavioural characteristics and awareness of its potential consequences for mental health and academic functioning among students at the University of Sunderland.

Methods: A cross-sectional quantitative survey was conducted among University of Sunderland students using a structured self-administered questionnaire. Participants were recruited through convenience sampling, and data were analysed using IBM SPSS Statistics. Descriptive statistics were used to summarise participants' demographic characteristics and knowledge of internet addiction.

Results: Participants demonstrated a high level of knowledge regarding internet addiction and its potential impact on mental health. Most respondents correctly identified the characteristics of problematic internet use and recognised that excessive internet use may contribute to adverse psychological outcomes, including anxiety, depression and emotional distress, as well as impaired academic performance and social functioning. The findings also indicated strong awareness of behavioural features associated with internet addiction, suggesting that internet addiction is widely recognised as a behavioural health concern within the study population.

Conclusion: University students demonstrated substantial knowledge of internet addiction and its potential implications for mental health. Nevertheless, awareness alone may not be sufficient to reduce engagement in excessive internet use or prevent its adverse consequences. Higher education institutions should therefore complement awareness initiatives with evidence-based digital wellbeing programmes that encourage healthy internet use, strengthen self-regulation and support early identification of students at risk of problematic internet use. The findings provide valuable evidence to inform health promotion strategies and student wellbeing initiatives within university settings.

KEYWORDS: *Internet addiction; problematic internet use; knowledge; mental health; university students; higher education; digital wellbeing.*

INTRODUCTION

Digital technologies have become deeply embedded in contemporary higher education, fundamentally reshaping how students learn, communicate, collaborate, and access information. Internet-enabled platforms now support almost every aspect of university life, from virtual learning environments and electronic libraries to online assessment, social interaction, and professional networking. Although these developments have enhanced educational accessibility and flexibility, they have also generated increasing concern regarding excessive or poorly regulated internet use and its potential implications for psychological wellbeing (Deng et al., 2023; Zewude et al., 2024).

Internet addiction, often referred to as problematic internet use, describes persistent or poorly controlled internet

engagement that interferes with daily functioning and results in psychological, social, academic, or occupational impairment (Ko et al., 2012; Sánchez-Fernández et al., 2023). Rather than reflecting high internet use alone, the condition is characterised by diminished self-regulation, compulsive online behaviour, withdrawal symptoms when internet access is restricted, and continued engagement despite adverse consequences. Although debate continues regarding diagnostic classification, there is broad agreement that problematic internet use represents an important behavioural health concern among young adults and university students (Sánchez-Fernández et al., 2023; Tran Quang Duc et al., 2024).

University students constitute one of the populations most frequently exposed to intensive internet use because digital technologies are integral to their academic and

social environments. Online lectures, electronic resources, collaborative learning platforms, virtual meetings, and social media have become routine components of university education. This sustained exposure provides considerable educational opportunities but may also increase vulnerability to excessive internet engagement, particularly when academic demands coexist with extensive recreational online activities (Deng et al., 2023; Brouzos et al., 2024).

Growing evidence indicates that problematic internet use is associated with a range of adverse mental health outcomes. A comprehensive meta-analysis involving more than 498,000 students demonstrated consistent associations between problematic internet use and depressive symptoms, anxiety, loneliness, psychological distress, and reduced subjective wellbeing (Cai et al., 2023). Similarly, recent empirical research among university students has shown that internet addiction is closely associated with poorer mental health and that emotional intelligence may partially mediate this relationship, suggesting that psychological resources influence how students respond to excessive internet engagement (Zewude et al., 2024).

Despite increasing recognition of these associations, prevention strategies depend not only on identifying behavioural risk factors but also on understanding what students know about internet addiction and its potential consequences. Knowledge is a central determinant of health behaviour because awareness of risk can influence individual decision-making, encourage healthier behavioural choices, and improve engagement with preventive interventions. Within public health, strengthening knowledge has long been recognised as a fundamental component of behavioural change, particularly for emerging lifestyle-related health risks.

Existing investigations into internet addiction have predominantly focused on prevalence, psychological correlates, predictive factors, or intervention effectiveness (Cai et al., 2023; Sánchez-Fernández et al., 2023; Brouzos et al., 2024). Comparatively fewer studies have examined whether university students possess adequate knowledge of internet addiction itself, understand its behavioural characteristics, or recognise its possible effects on mental health. This distinction is important because awareness cannot be assumed simply because digital technologies are used extensively. Students may engage confidently with internet-based resources while having limited

understanding of behaviours that distinguish healthy digital engagement from problematic use.

Knowledge assumes particular importance within university settings because students are expected to regulate their own academic activities, social interactions, and digital behaviours with relatively little external supervision. Individuals who recognise the behavioural indicators and psychological consequences of internet addiction may be better equipped to identify early warning signs, moderate their internet use, and seek appropriate support when necessary. Conversely, limited awareness may delay recognition of problematic behaviours until adverse academic or mental health consequences become established.

The present study therefore examined knowledge of internet addiction and its mental health consequences among students at the University of Sunderland. Specifically, the study assessed students' understanding of internet addiction, their awareness of its behavioural characteristics, and their knowledge of its potential implications for mental health and academic functioning. Generating evidence on these aspects may assist universities and public health practitioners in developing educational initiatives that promote responsible digital engagement while supporting student mental wellbeing.

METHODS

Study Design

A quantitative cross-sectional survey design was adopted to assess university students' knowledge of internet addiction and its potential impact on mental health. A cross-sectional approach was considered appropriate because it enabled the collection of data from a large student population at a single point in time, providing a snapshot of participants' knowledge and awareness regarding internet addiction. The design also facilitated the efficient examination of knowledge-related variables without manipulating participants' behaviour or exposing them to any intervention.

Study Setting

The study was conducted at the University of Sunderland, United Kingdom. The university comprises students from diverse educational, cultural, and socioeconomic backgrounds and provides a suitable setting for examining

knowledge of internet addiction within a contemporary higher education environment where internet use forms an integral component of learning, communication, and everyday student life.

Study Population

The target population consisted of undergraduate and postgraduate students enrolled at the University of Sunderland during the study period. Students aged 18 years and above who were registered at the university and able to complete an online questionnaire in English were eligible to participate. Students who did not provide informed consent or submitted incomplete questionnaires were excluded from the final analysis.

Sample Size and Sampling Strategy

A convenience sampling strategy was employed because it enabled efficient recruitment of students across different programmes of study within the available timeframe. Invitations to participate were distributed electronically using university communication channels, allowing students to access the questionnaire voluntarily.

A total of 250 completed questionnaires were included in the final analysis. This sample provided sufficient observations to describe patterns of knowledge regarding internet addiction and its potential consequences among the participating students.

Data Collection Instrument

Data were collected using a structured self-administered questionnaire developed following a review of the literature on internet addiction, mental health, and university students. The questionnaire comprised demographic questions together with items assessing respondents' knowledge of internet addiction and its mental health consequences.

For this paper, the analysis focused exclusively on the knowledge component of the questionnaire. Participants were asked about their understanding of internet addiction, awareness of its behavioural characteristics, knowledge of its addictive potential, and awareness of its possible effects on mental health and academic functioning. Responses were recorded using a five-point Likert scale ranging from strongly disagree to strongly agree, enabling the measurement of the degree of agreement with each knowledge statement.

The online questionnaire was created and administered using the Qualtrics survey platform, allowing participants to complete the survey anonymously using computers, tablets, or mobile devices.

Data Collection Procedure

Eligible students accessed the questionnaire through an electronic survey link. Before commencing the survey, participants were provided with an information sheet explaining the purpose of the study, the voluntary nature of participation, and the procedures adopted to maintain confidentiality. Electronic informed consent was obtained before respondents could proceed to the questionnaire.

No personally identifiable information was collected. Participants were free to discontinue participation at any stage before submitting their responses without penalty.

Data Analysis

Completed questionnaires were exported into the Statistical Package for the Social Sciences (SPSS) for analysis. Data cleaning was undertaken before statistical analysis to identify incomplete responses and ensure data accuracy.

Descriptive statistical techniques were used to summarise participants' responses. Frequencies and percentages were calculated for categorical variables, while means and standard deviations were used to describe responses to the knowledge items. The analysis focused on describing participants' level of knowledge regarding internet addiction and its recognised effects on mental health and academic functioning.

Consistent with the objective of this paper, no inferential analyses were undertaken, as the study sought primarily to describe students' knowledge rather than examine associations between variables.

Ethical Considerations

Ethical approval for the study was obtained from the University of Sunderland Research Ethics Committee before data collection commenced. Participation was entirely voluntary, and electronic informed consent was obtained from all respondents before completion of the questionnaire.

Confidentiality and anonymity were maintained throughout the study. No identifying information was collected, and all data were stored securely in accordance with university research governance procedures and applicable data protection requirements. Participants were informed that they could withdraw from the survey at any time before submission without providing a reason and without any adverse consequences.

RESULTS

Participant Characteristics

A total of 250 completed questionnaires were included in the analysis. Participants represented both undergraduate and postgraduate programmes across the University of Sunderland. Students from a range of academic disciplines participated, with the largest proportion enrolled within the Faculty of Health Sciences and Wellbeing. The sample reflected a diverse student population in terms of age, programme of study, and educational background, providing an appropriate basis for assessing knowledge of internet addiction within a higher education setting (see Supplementary Materials).

Knowledge of Internet Addiction

Participants demonstrated a high level of awareness of internet addiction and its defining characteristics (Table 1). Most respondents indicated that they understood the primary purpose of the internet, with 91.6% either agreeing or strongly agreeing with this statement. Similarly, 85.2% reported that they knew what internet addiction means, while an identical proportion recognised that the internet has addictive potential.

Knowledge extended beyond recognition of the term itself. Most participants correctly identified internet addiction as excessive engagement with online activities, including social networking, gaming, online gambling, live streaming, and other internet-based activities that may interfere with normal daily functioning.

These findings indicate that internet addiction is a concept with which the majority of students were already familiar, suggesting substantial awareness of both the existence of the condition and its behavioural manifestations.

Table 1: Knowledge of internet addiction among University of Sunderland students

Knowledge of Internet Addiction	SA	SWA	NAD	SWD	SD	Mean
I understand the main purpose of using the internet	185 (74.0%)	44 (17.6%)	18 (7.2%)	1 (0.4%)	2 (0.8%)	4.64
I know what it means to be addicted to the internet	157 (62.8%)	56 (22.4%)	18 (7.2%)	9 (3.6%)	10 (4.0%)	4.36
I am aware of the addictive nature of the internet	157 (62.8%)	56 (22.4%)	26 (10.4%)	9 (3.6%)	2 (0.8%)	4.43
I know the impact of internet addiction	138 (55.2%)	64 (25.6%)	23 (9.2%)	18 (7.2%)	7 (2.8%)	4.23
Internet addiction has positive impact on mental health	49 (19.6%)	61 (24.4%)	48 (19.2%)	47 (18.8%)	45 (18.0%)	3.09
Internet addiction has negative impact on mental health	120 (48.0%)	88 (35.2%)	27 (10.8%)	11 (4.4%)	4 (1.6%)	4.30

Internet addiction has positive and negative impact on mental health	95 (38.0%)	63 (25.2%)	51 (20.4%)	21 (8.4)	20 (8.0%)	3.37
Total Mean Value						4.06

Note: SA- Strongly agree, SWA- Somewhat agree, NAD- Neither agree nor disagree, SWD- Somewhat disagree, SD- Strongly disagree

Knowledge of the Mental Health Consequences of Internet Addiction

Participants also demonstrated considerable awareness of the psychological consequences associated with excessive internet use (Table 2). More than four-fifths of respondents recognised that internet addiction can adversely affect mental health. Specifically, 83.2% agreed or strongly agreed that excessive internet use may contribute to psychological problems, while 73.6% acknowledged that internet addiction can negatively affect academic performance.

Respondents further recognised that problematic internet use may influence emotional wellbeing, social functioning, and everyday activities. The high proportion of affirmative responses across these items suggests that participants were aware that internet addiction extends beyond excessive screen time and may have broader implications for psychological health and academic success.

The descriptive statistics demonstrated consistently high mean scores across the knowledge items, indicating strong agreement with statements describing both the characteristics of internet addiction and its potential adverse consequences.

Table 2: Knowledge of the impact of internet addiction on mental health and academic functioning

Perception	Agree	Neutral	Disagree	Mean
It can lead to increased proficiency in internet-based games	147 (58.8%)	83 (33.2%)	20 (8.0%)	2.51
It increases anxiety	110 (44.0%)	108 (43.2%)	32 (12.8%)	2.31
It increases social dysfunction	120 (48.0%)	99 (39.6%)	31 (12.4%)	2.36
It causes mood disorder	108 (43.2%)	101 (40.4%)	41 (16.4%)	2.27
It results in poor sleep quality	172 (68.8)	53 (21.2%)	25 (10.0%)	2.59
It can cause depression	125 (50.0%)	92 (36.8%)	33 (13.2%)	2.37
It can aid the process of rapidly conducting research and business dealings	181 (72.4%)	53 (21.2%)	16 (6.4%)	2.66

It can help to improve skills of doing assignments faster and better	185 (74.0%)	53 (21.2%)	12 (4.8%)	2.69
It can lead to prompt access to the latest news and information across the globe	196 (78.4%)	44 (17.6%)	10 (4.0%)	2.74
It can lead to maintaining a close relationship with friends and family in distant and different locations	163 (65.2%)	57 (22.8%)	30 (12.0%)	2.45
It can lead to suicide	97 (38.8%)	110 (44.0%)	43 (17.2%)	2.22
Total Mean Value				2.47

Summary of Knowledge Findings

Collectively, the findings indicate that participants possessed a high level of knowledge regarding internet addiction and its potential effects on mental health. Awareness was particularly strong in relation to the addictive nature of internet use, recognition of internet addiction as a behavioural condition, and understanding of its possible consequences for psychological wellbeing and academic performance.

Although the study identified substantial awareness across the surveyed population, the descriptive findings alone cannot determine whether this knowledge translates into healthier internet use behaviours. Nevertheless, the consistently high levels of agreement across the knowledge items suggest that internet addiction has become a well-recognised public health issue among university students.

DISCUSSION

The findings demonstrate that participants possessed a high level of knowledge regarding internet addiction and its potential implications for mental health. Respondents were generally able to identify internet addiction as a behavioural problem, recognised its adverse psychological consequences, and distinguished between healthy and excessive patterns of internet use. This level of awareness is encouraging because knowledge constitutes an important prerequisite for recognising harmful behaviours and promoting timely help-seeking. Nevertheless, the findings also suggest that awareness alone may be insufficient to prevent problematic internet use, reinforcing the distinction between possessing knowledge and translating that

knowledge into sustained behavioural change. Contemporary evidence consistently indicates that university students remain particularly vulnerable to problematic internet use despite increasing awareness of its potential consequences, largely because behavioural, psychological and environmental influences extend beyond cognitive understanding (Li et al., 2015; Sánchez-Fernández et al., 2023).

Although participants demonstrated substantial knowledge of internet addiction, many acknowledged patterns of prolonged internet use and frequent engagement with online activities such as social networking and entertainment. This apparent inconsistency highlights the complex nature of behavioural addictions. Knowledge may improve recognition of risk but does not necessarily overcome habitual behaviours, emotional dependence or environmental reinforcement. Behavioural addiction is influenced by multiple interacting factors, including impulsivity, poor emotional regulation, social isolation, stress and academic pressures, many of which are common within university populations. Recent systematic evidence similarly suggests that problematic internet use should be understood as a multidimensional phenomenon rather than a simple consequence of inadequate awareness, with psychological vulnerability and patterns of online engagement representing stronger predictors than knowledge alone (Helsper & Smahel, 2020; Schimmenti, 2023; Tunney & Rooney, 2023).

Participants also recognised a broad range of adverse mental health outcomes associated with excessive

internet use, including anxiety, depression, mood disturbances and impaired social functioning. These perceptions are consistent with the growing body of evidence demonstrating significant associations between problematic internet use and poorer psychological wellbeing among students. A comprehensive meta-analysis involving almost half a million participants reported consistent associations between problematic internet use and depression, anxiety, loneliness, stress, reduced life satisfaction and diminished psychological wellbeing across diverse educational settings (Cai et al., 2023). The present findings therefore reinforce the importance of considering problematic internet use within broader student mental health strategies rather than treating it solely as an issue of technology use.

At the same time, respondents recognised that internet use is not inherently detrimental. Many identified important educational and social benefits, including improved access to learning resources, communication, information retrieval and academic collaboration. This balanced perspective reflects the increasingly indispensable role of digital technologies within contemporary higher education. Internet use has become fundamental to teaching, learning and research, making complete avoidance neither realistic nor desirable. Instead, the challenge lies in promoting healthy and purposeful engagement while minimising behaviours characterised by excessive, compulsive or uncontrolled use. Recent studies similarly emphasise that the distinction between adaptive and maladaptive internet use depends less on frequency of use than on the functional impact of that use on psychological wellbeing, academic performance and daily functioning (Kuss & Lopez-Fernandez, 2016; Kim & Kim, 2023; Shiraly et al., 2024).

The identification of social networking, unrestricted internet access, online gaming and gambling as important contributors to internet addiction is consistent with contemporary evidence. These online activities have repeatedly been identified as among the strongest behavioural predictors of problematic internet use in university populations because they combine immediate reward, continuous availability and powerful reinforcement mechanisms that encourage prolonged engagement. Furthermore, excessive involvement in these online activities frequently coexists with depression, anxiety and other indicators of psychological distress, suggesting that problematic internet use should be viewed within a broader behavioural and mental health framework rather than as an

isolated condition (Casale et al., 2015; Anderson et al., 2017; Mota et al., 2021).

These findings have important implications for higher education institutions. While awareness campaigns remain valuable, interventions should extend beyond information provision to include practical strategies that promote digital self-regulation, responsible online behaviour and psychological resilience. Universities are well positioned to integrate digital wellbeing into student support services, mental health programmes and health promotion initiatives. Early identification of students exhibiting problematic internet use may facilitate timely intervention before adverse academic or psychological outcomes become established. Such approaches are increasingly advocated within contemporary evidence, which emphasises the need for integrated prevention strategies combining education, behavioural support and accessible mental health services rather than relying exclusively on awareness-raising initiatives (WHO, 2021; WHO, 2024; WHO, 2025).

Several limitations should be acknowledged when interpreting these findings. The cross-sectional design precludes causal inference, while the use of a single university sample may limit the transferability of the findings to other student populations. In addition, reliance on self-reported responses introduces the possibility of recall and social desirability bias. Despite these limitations, the study provides valuable evidence regarding university students' knowledge and perceptions of internet addiction and its relationship with mental health. The consistency observed across the different domains suggests that students possess a sound understanding of internet addiction while highlighting the continuing need for interventions that bridge the gap between knowledge, healthy digital behaviour and psychological wellbeing.

CONCLUSION

This study provides evidence that university students possess a high level of knowledge regarding internet addiction and its potential implications for mental health. Participants demonstrated a clear understanding of the characteristics of problematic internet use and recognised the psychological, social and academic consequences associated with excessive online engagement. At the same time, the findings indicate that awareness alone does not necessarily prevent behaviours associated with prolonged

or potentially harmful internet use. This distinction underscores the complexity of behavioural addictions and highlights the need for interventions that extend beyond knowledge acquisition to support healthier patterns of digital engagement.

The study also demonstrates that students hold balanced perceptions of internet use, acknowledging both its educational benefits and its potential risks. While digital technologies have become indispensable for learning, communication and information access within higher education, excessive or uncontrolled use remains a concern because of its association with poorer mental health outcomes and impaired academic functioning. Universities therefore have an important role in fostering digital wellbeing through integrated approaches that combine health education, behavioural self-regulation, early identification of problematic internet use and accessible mental health support services.

Although the study was conducted within a single higher education institution and employed a cross-sectional design, the findings contribute to the growing evidence on internet addiction among university students in the United Kingdom. They provide contemporary insight into students' knowledge, attitudes and perceptions and highlight the importance of addressing problematic internet use as part of broader student wellbeing initiatives.

Future research should extend this work through multi-institutional studies involving more diverse student populations to enhance the generalisability of the findings. Longitudinal investigations are also warranted to examine how knowledge and perceptions influence patterns of internet use over time and whether educational and behavioural interventions produce sustained improvements in digital wellbeing and mental health. Further research exploring the effectiveness of university-based prevention programmes would provide valuable evidence to inform institutional policies and student support strategies aimed at promoting healthy and responsible internet use.

AUTHOR CONTRIBUTION

All authors played a substantive role in shaping this study and developing the manuscript. M.F.A. conceptualised the work and designed the overall study framework. Data analysis, theme development and validation of findings were carried out collaboratively, with each author contributing to the discussions that informed the final

results. I.F.N. and K.O.O. prepared the initial manuscript draft, covering the introduction, methods, results and discussion. Co-authors strengthened the analysis, offered detailed revisions and enhanced the clarity and coherence of the final document. Every author reviewed the complete manuscript, approved the final version and accepted responsibility for the integrity of the work.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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SUPPLEMENTARY MATERIALS
Sociodemographic characteristics of participants

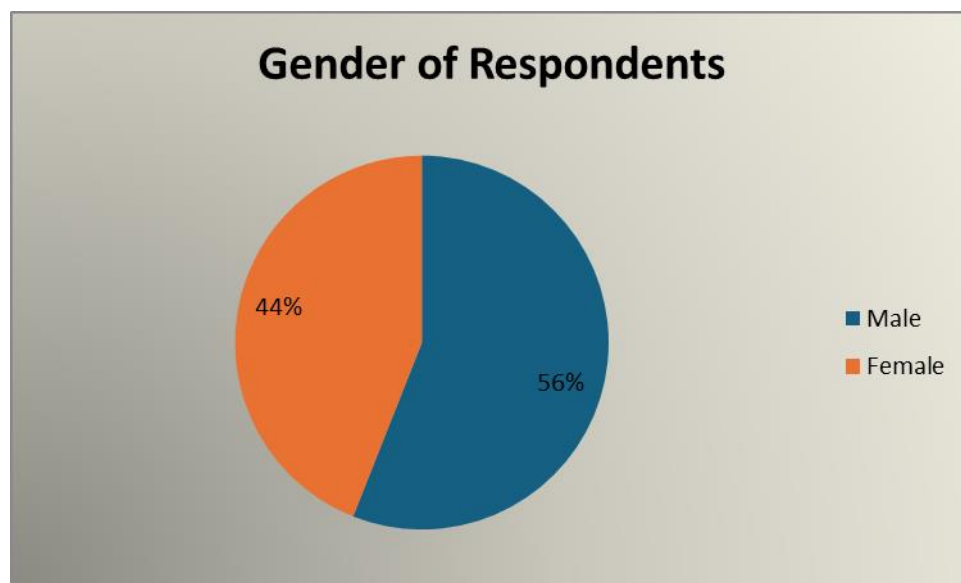


Figure 1: Gender of students

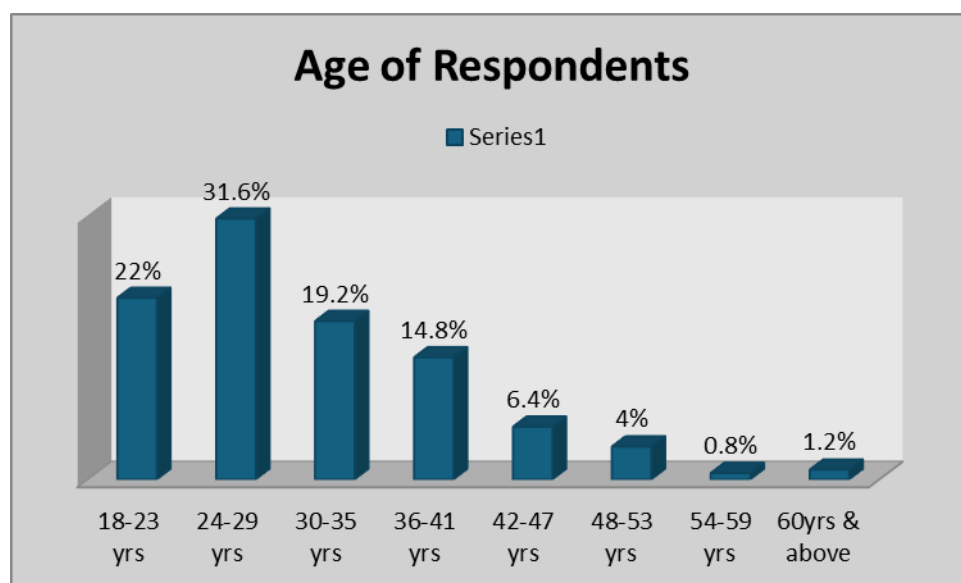


Figure 2: Age of students

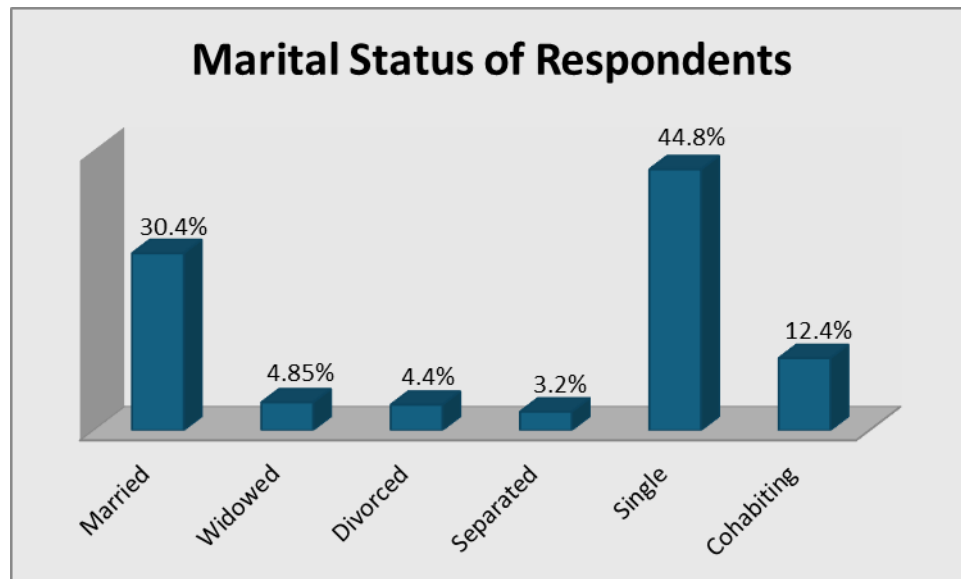


Figure 3: Marital status of students

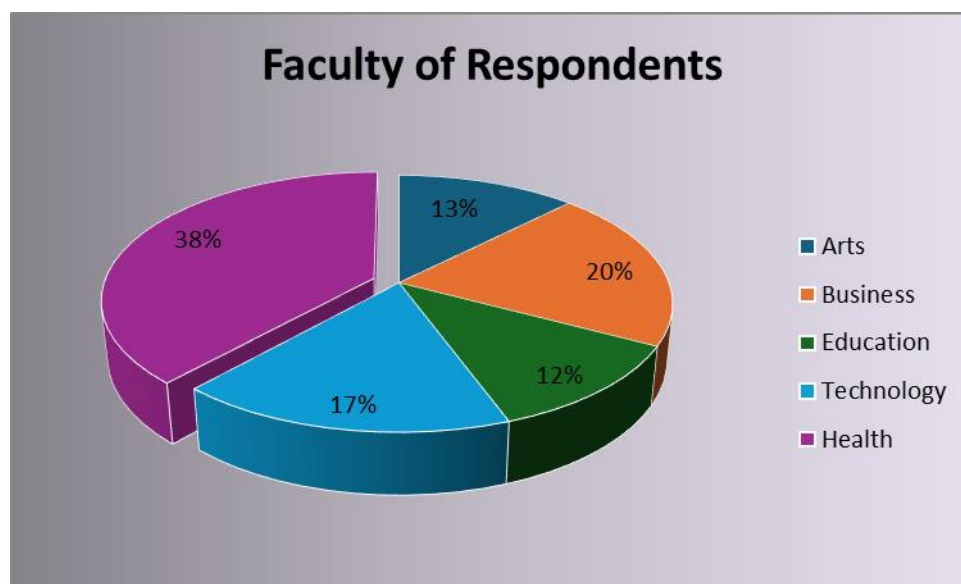


Figure 4: Faculty of students

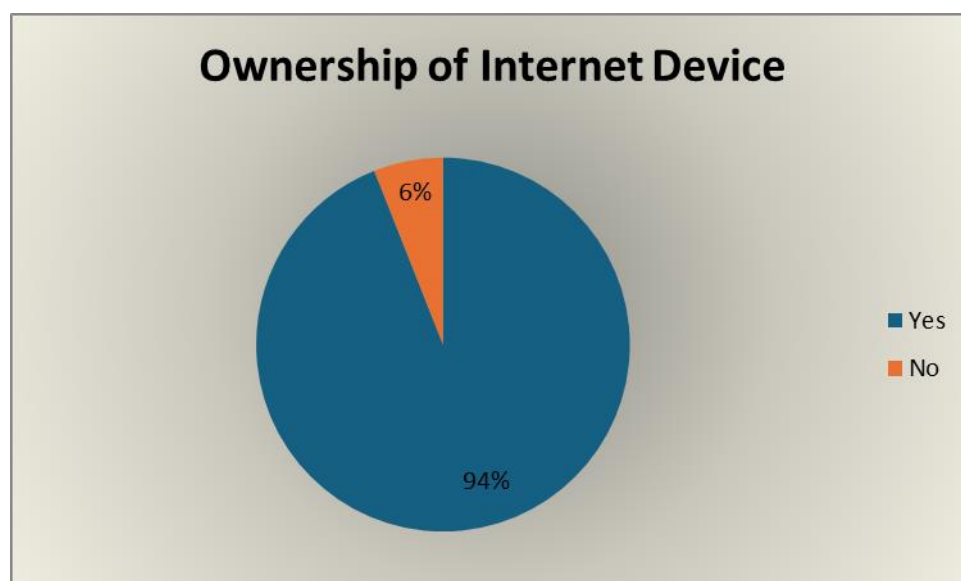


Figure 5: Students' ownership of internet devices

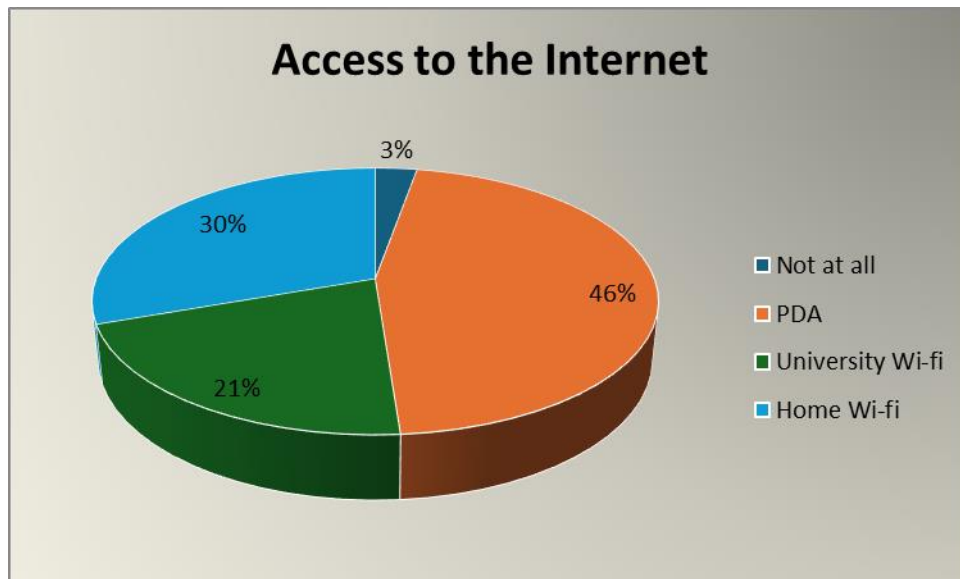


Figure 6: Students' access to the internet

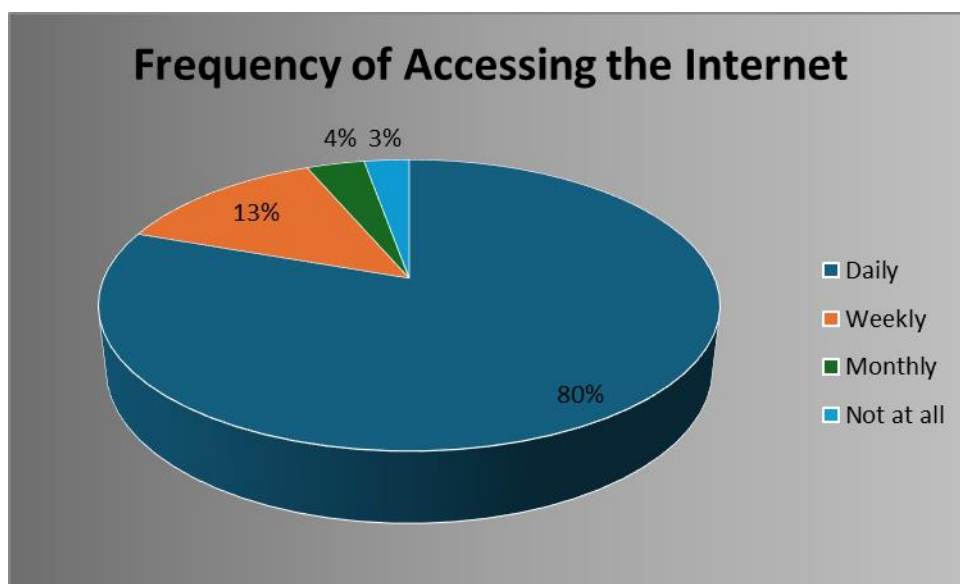


Figure 7: Frequency of students' access to the internet