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Prevalence and Associated Factors of Internet Addiction Among Male Students of Jubail University College, Saudi Arabia

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ABSTRACT

This study aims to determine the associated factors and prevalence of Internet addiction among Jubail University College – Male Branch students. Descriptive cross-sectional method was applied. 171 students participated. Self-administered survey questionnaire was the data-gathering instrument. Young's Internet Addiction Test was used to determine the level of internet usage. Factors associated with high internet consumption are accessibility, boredom, isolation, and extreme weather condition. Covid-19 pandemic changed the way respondents consume internet. It also changed the respondents' sleeping pattern and increases the average internet usage per day. Though the internet played a vital role during Covid-19 pandemic, it also increases the dependency of students on it. Higher number of moderate level internet addiction has been found among respondents. Therefore, it is encouraged that JUC should design a program to address the current situation.

KEYWORDS

Internet Addiction, Internet Dependence, Excessive Internet Usage, Associated Factors for Internet Dependence, Screen Addiction, Screen Dependence, Technology Dependence

1. INTRODUCTION AND BACKGROUND

The internet started in USA in the 1950s. Initially the purpose of internet is for military defense. Former US President Dwight D. Eisenhower formed the Advanced Research Projects Agency (ARPA) in 1958 and led to the formation of the ARPANET (Advanced Research Projects Agency Network). The aim of the ARPANET was to help American military technology stay ahead of its enemies (Science+Media Museum, 2020). Since then, internet quickly grew and become a global interconnected network of networks, or 'Internet'. Internet became a mechanism for information dissemination, and a medium for collaboration and interaction between individuals regardless of geographic location (Internet Society, 2017). As of January 2022, there were 4.95 billion internet users worldwide - 62.5 percent of the global population. Of this total, 4.62 billion were social media users (Johnson, 2022). On average, internet user spends 6 hours and 42 minutes online each day (Zuckerman, 2020).

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Even before the Covid-19 pandemic, internet activities and technologies are increasing rapidly. It has been our source of countless opportunities for personal fulfilment, professional development and value creation. It has become a vital necessity for working, learning, accessing basic services and keeping in touch. When Covid-19 hit the world, Internet has become more vital necessity for working, learning, accessing basic services and keeping in touch.

Internet use is near-ubiquitous among teens and young adults. In the last decade, the young adult internet population has remained the most likely to go online. According to Pew Research Center (2020), over the past ten years, teens and young adults have been consistently the two groups most likely to go online. In 2019, 4.1 billion people were using the Internet. Since then, the number of users has surged by 782 million to reach 4.9 billion people in 2021, or 63 per cent of the population.

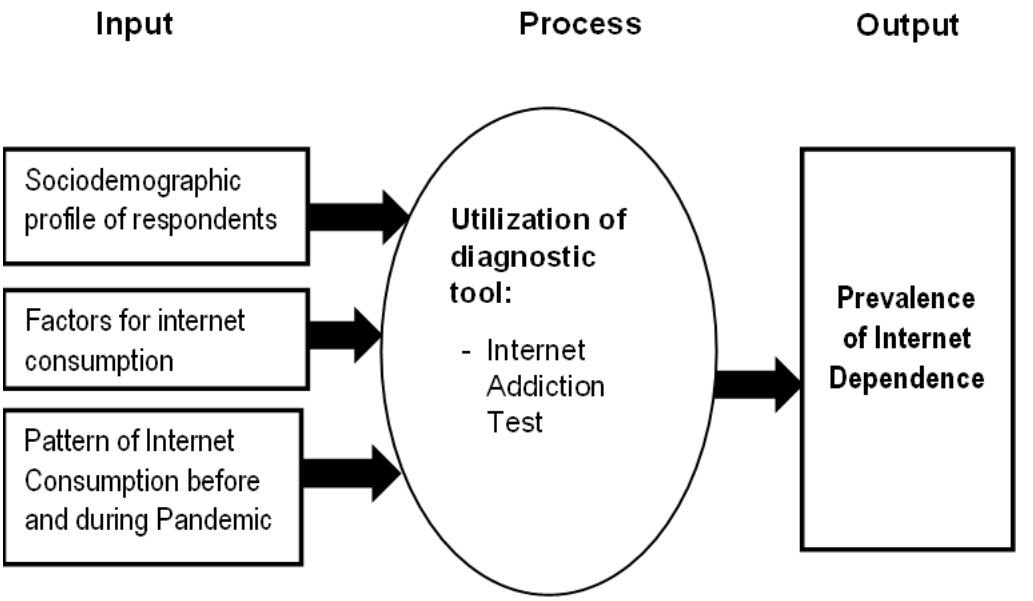
On December 31, 2019, as a typical black swan event, Covid-19 took the world by complete surprise. This newly identified coronavirus was first seen in Wuhan, the capital of Central China's Hubei province (Kilpatrick & Barter, 2021). Due to the threat of the Covid-19, many educational institutions worldwide suspended their academic activities and classes. Saudi Arabia suspended the in-attendance education activities in all schools, universities and educational institutions since March 9, 2020 and directed all educational institutions to implement distance learning through online platforms (Khalid, 2020). During the Covid-19 lockdown, the risk of internet addiction increased due to the dependence on the internet to perform daily activities and as an outlet for mental pressures (Siste et al., 2020). Jubail University College, the setting of the study, complied with the directive to shift the face-to-face classes to online learning. In 2020, the first year of the Covid-19 pandemic, the number of Internet users grew by 10.2 per cent, the largest increase in a decade (ITU, 2021). According to several studies, there is a higher prevalence of Internet usage during Covid-19 pandemic (Li et. al, 2021; Besalti & Satici, 2022, Siste et. al. 2021). Excessive Internet usage could have several impacts on mental health, such as greater severity of depression (Seki, Hamazaki, Natori, & Inadera, 2019) and anxiety (Soulioti, Stavropoulos, Christidi, Papastefanou, & Roussos, 2018).

With the growing use of the Internet, excessive use of it could interfere daily activities that may become a big concern. The higher Internet penetration rate could possibly cause Internet addiction, especially among youngsters. In 2014, Cheng & Li found out that Internet addiction around the world is about 6%. In Saudi Arabia, an Islamic conservative country in Middle-East, there are already few studies conducted related to Internet Addiction. For the past few years, Saudi Arabia has also been ranking among the countries where people spend most hours online (Jaffery, 2018). With 32.3 million residents, 20.8 million of them are active internet users. Users are between the ages of 16-35. Like the rest of the world, the internet is being used for several different purposes in Saudi Arabia. The bulk of day-to-day searches include the latest football results, news stories, and viral videos. The most popular websites are used for social media, news, business, entertainment, shopping, and search inquiries (Boshers, 2016). Internet addiction is an increasing problem among universities worldwide. Several studies found out that males have higher prevalence estimates of Internet Addiction (Mei, Yau, Chai, Guo, & Potenza, 2016). Male gender has also been identified as a risk factor for Internet Addiction Disorder, as reported by several studies (Choi et al., 2015; Lee et al., 2014). In Saudi Arabia, college students are sex-segregated due to Islamic religion that prohibits social interaction between non-relative male and female. With the afore-mentioned situations, the researcher will endeavor to find out the prevalence of Internet addiction and its associated factors among the male university students. hus, necessary recommendation, such as program or campaign, can be done to address any significant finding.

1.1 Conceptual Framework

The conceptual framework of the study is illustrated in Figure 1 utilizing the "Input-Process-Output" model. The sociodemographic profile, factors influencing internet consumption, and pattern of Internet consumption before and during Covid-19 pandemic are the inputs of the study. By utilizing the standard diagnostic tool, Internet Addiction Test (IAT), the prevalence Internet addiction can be identified. The IAT will determine the level of internet usage, such as normal, mild, moderate, and

Figure 1. Paradigm of the study



severe dependence on Internet (Young,1998). Thus, recommendations can be offered in the event that there is beyond normal prevalence of internet usage among the respondents.

1.2 Statement of the Problem

This study aims to determine the associated factors and prevalence of Internet addiction among the Jubail University College – Male Branch students in Saudi Arabia.

Specifically, it sought to answer the following inquiries:

1. What are the factors that influences respondents with regards to internet consumption?
2. Is there a significant difference in the pattern of internet consumption of respondents before and during Covid-19 pandemic?
3. What is the prevalence of Internet addiction among the respondents?

1.3 Hypothesis

The hypothesis is tested in their null form at the 0.05 level of significance:

H_1: There is no significant difference in the pattern of internet consumption of respondents before and during pandemic.

1.4 Scope and Delimitation of the Study

The setting of the study is the Jubail University College – Male Branch, a government university affiliated to Royal Commission of Jubail and Yanbu, in the Eastern Province of Saudi Arabia. At present, Male Branch is offering seven (7) bachelor's degree programs. Students from different programs are the respondents of the study. The respondents were surveyed using the questionnaire designed by the researcher and Dr. Young's Internet Addiction Test (IAT).

Due to sex-segregation in education system of Saudi Arabia and recent findings from several studies that males have higher prevalence of Internet Addiction and risk factor for Internet Addiction Disorder, male students were chosen as subject of the study. Self-selection sampling was the sampling technique used. One hundred and seventy-one (171) students participated as respondents.

2. REVIEW OF RELATED LITERATURES

This part presents the related literatures and studies which may have direct or indirect significance to the study. Foreign literatures present the published information around the world related to the study while the local literatures present the published information related to the situation in Saudi Arabia, specifically on Internet usage.

2.1 Foreign Literatures

Problematic Internet Use (Davis,2001), Internet dependence (Dowling & Quirk, 2009), compulsive or excessive Internet use (K.W, 2005) is also synonymously referred as Internet Addiction. According to Weinstein & Lejoyeux (2010), Internet Addiction is an excessive Internet use characterized by excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and Internet access that led to impairment or distress. Internet addiction was first identified in 1995 based on 600 case studies involving people who suffered from educational, academic, financial, or relationship problems or even job loss because they experienced a loss of control over their Internet use (Young & Brand, 2017).

Excessive use of the Internet possibly for online relationships, socializing, chat rooms, gaming, gambling, shopping or browsing would result in Internet addiction (Murugesan et al., 2018; Andreassen et al., 2014). Another suspected culprit to Internet addiction could be the new Internet applications, for example Facebook, Twitter, and WhatsApp, which make technology a significant part of most people's everyday life (Montag et al., 2015). Increased and frequent use of the Internet could lead to addiction that would be of major concern especially for adolescents or teenagers (Murugesan et al, 2018). In the blog of The Dawn Rehab Thailand (2021), people who are socially awkward or suffer emotional issues, internet can be a place of solace and comfort that can lead for behavioral addiction – internet addiction. Preoccupation with the Internet impaired functioning is correlated to symptoms of Internet Addiction (Bai et. al., 2022).

In the study of Zenebe et. al. (2021), there is a high prevalence of internet addiction among Ethiopian students. Factors associated with internet addiction were spending more time, having mental distress, playing online games, current khat chewing, and current alcohol use. There is also high prevalence of Internet Addiction in GCC countries for several reasons. Young Arabs spend a substantial amount of time in front of screens (Al-Hazzaa et al., 2014). In Iran it was reported that one out of every five school and university students was addicted to the internet (Modara et al., 2017). In Lebanon, Hawi (2012) found out that the more problematic Internet use (PIU) was, the less the Internet was used for information and research, and the more it was used for entertainment. PIU is driven by deficiency needs fueled by the use of interactive applications. The more deficient the need, the greater the obsession with top-notch interactive applications, and the less frequent the usage of non-interactive applications.

Tus et. al. (2021), in their study among Filipino Senior High school students during Covid-19 pandemic, concluded that addictive social media use is associated with depression. In China (Sun et al., 2020; Cui & Chi, 2021; Li et. al., 2021), during the Covid-19 pandemic, there is a reported increased dependence on internet use and longer hours of internet use. Three coping behaviors during pandemic are: internet, alcohol, and smoking. It appears that during Covid-19 related crisis appear to have increased the risk for substance use disorders and internet addiction. Studies in Turkey shows that daily internet use time of the adolescents has increased during Covid-19 pandemic (Besalti & Satici, 2022). Study in Indonesia by Siste et. al. (2021) discovered that the prevalence of Internet

addiction among adolescents is higher than the adult during the pandemic. Several countries such as India, Malaysia, Mexico and UK showed that adolescents generally have increased their use of social media sites and streaming services (Fernandes et. al., 2020; Sam et. al., 2021). Khodabakhsh et. al (2021) in their study among Malaysian adolescents, concluded that high Internet usage is associated with high health anxiety while Jordanian students were experiencing anxiety and depression (Malak & Khalifeh, 2018). Study conducted in United States by Khubchandani et. al. (2021), concluded an increase in internet addiction among adults during the Covid-19 pandemic. Severe internet addiction was strongly predictive of depression, anxiety, and psychological distress. Study in Egypt by Shehata & Abdeldaim (2021) observed that during the Covid-19 pandemic, Internet addiction was more prevalent among students.

2.2 Local Literatures

Based on the study of Hussien (2022) and Al-Thaqafi (2021) there was a highly statistically significant correlation between well-being and hours of daily internet use, indicating that internet addiction is a strong negative predictor of mental well-being. Among 14 to 19-year-old Saudis reported excessive screen time, more than 2 hours per day (Al-Hazzaa et al., 2014). Desouky (2018) and Desouky & Zaid (2020) found out that there is a significant higher prevalence of both mobile and internet addiction found among Saudi students who had more intensive use of mobile and internet. Furthermore, smartphone addicted students more likely to had a lower GPA and poor physical health as well as having a serious mental illness compared to non-addicted students (Alotaibi, 2022). According to Alrekebat (2016) Internet addiction affects individual's social interaction who lean more to social interaction by using internet mode than direct interaction. Loneliness was associated with Internet use. Lonely users more likely to seek emotional support online and find there (Awad et. al., 2018; Abdel-Salam et. al., 2019). Hours of daily social media use, frequency of social media use during lectures, Snapchat use, and students' perception of the advantages of social media were predictors of social media addiction. Those who started using smartphones at an early age were also found to be more addicted (Al-Shaibani, 2020; AlBoali et. al., 2020; Alosaimi et. al., 2016).

According to Saquib (2020), Internet Addiction is a fast-rising problem in Saudi Arabia, particularly affecting adolescents and young adults. Potential reasons for this problem are: internet coverage has gone up ten-fold in the last decade; most adolescents have access to electronic devices; and extreme weather - extreme heat during summer, likely increases their use of digital media by forcing people to stay inside during the daytime (Al-Khani, 2021). In two separate studies, the prevalence estimates for internet addiction in 2014–2015 were between 4% and 6% (Alhantoushi & Alabdullateef, 2014) while the estimates in 2019 are in the range of 30–60% (Abdel-Salam et. al., 2019). Internet use may be high due to the feelings of loneliness and low social support, especially during lockdown due to Covid-19 pandemic (Alheneidi et. al. 2021).

3. METHODOLOGY

3.1 Resign Design

The study employed the descriptive-cross sectional design. Descriptive cross-sectional studies provide data for describing the status of phenomena or relationships among phenomena at a fixed point in time. This can be thought of as a "snapshot" of the frequency and characteristics of a condition in a population at a particular point in time. The participants in a cross-sectional study are recruited based on the inclusion and exclusion criteria set for the study. Once the participants have been recruited for the study, the researcher follows the study to assess the exposure and the outcomes. Cross-sectional can also study the association between these variables (Ihudiebube-Splendor & Chikeme, 2020). This design is mostly used for population-based surveys and to assess the prevalence of condition, in this case the Internet addiction.

3.2 Research Instrumentation

Self-administered survey questionnaire was applied as data-gathering instrument for respondents. The survey is comprised of four (4) parts. The first part consisted of sociodemographic details that aims to gather the age, year-level, living arrangement, and Internet usage per day of the respondents. The second part of the survey aims to gather the factors influencing Internet consumption. The third part aims to gather comparative data on Internet consumption before and during Covid-19 pandemic. The fourth part of the survey is Young's Internet Addiction Test (AIT) that aims to assess the Internet addiction level. AIT was developed by Dr. Kimberly Young and considered as the first and reliable tool for Internet addiction. It has 20 questions and classified Internet addiction into mild, moderate, and severe. Each answer is scored on a Likert scale from 0 to 5: score 0 = not applicable; 1 = rarely, 2 = occasional; 3 = frequently; 4 = often; and 5 = always (Young, 1998). For the interpretation of the respondent's IAT response, total score is the sum of the ratings given for the 20 item responses. The higher the score is, the higher is the severity of your problem. Total scores that range from 0 to 30 points are considered to reflect a normal level of Internet usage; scores of 31 to 49 indicate the presence of a mild level of Internet addiction; 50 to 79 reflect the presence of a moderate level; and scores of 80 to 100 indicate a severe dependence on the Internet.

3.3 Data Gathering

Survey was administered through google forms, a survey administration software developed by Google. Announcement through email was sent to all students containing message informing the purpose of the survey and link that student will click-on to participate. Two-week time-frame was allotted for data gathering. Responses were downloaded and scrutinized for missing or invalid entries.

3.4 Data Analysis

For analysis of the gathered data, Statistical Package for the Social Sciences (SPSS) was utilized.

To analyze the data for the first inquiry, descriptive statistics was used to determine the frequency, and percentage of the variables.

For the second inquiry, paired sample t-test was utilized to determine any significant difference in the pattern of internet consumption among respondents before and during Covid-19 pandemic.

For the third inquiry, descriptive statistics were used to determine the frequency, percentage, and weighted means of prevalence of Internet addiction among respondents.

4. RESULT AND DISCUSSION

4.1 Factors Influencing Internet Consumption

Table 1 shows the sociodemographic profile of the respondents. One hundred seventy-one (171) students voluntarily participated in the study. Respondents' age is between 18 to 30, however, 52% of the total respondents ages between 21 to 24. 83 (49%) of the respondents are on their senior years. One of the college's services are dormitories, wherein students can live during their study in the college. But most of the respondents, 114 (67%), opted to live or stay with their family – a sign of closed family ties. According Zuckerman (2020) normal internet user spends 6 hours and 42 minutes online each day. In an article published in the website Webroot (2022), heavy internet users spend more than 16 hours a day, moderate users spend 8-16 hours a day, and light user spend less than 3-8 hours of internet a day. Data below shows that 99 (58%) of the respondents spend 8 to 16 hours a day for internet surfing. This finding is corroborated with recent study of Global Media Insight (2022) that the daily average time spent on Internet by Saudis is 8 hours and 5 minutes, which classifies them as moderate internet users.

Table 2 shows the factors influencing Internet consumption. In the survey, respondents can choose more than 1 factors that influence their internet consumption. Free access to Wi-Fi is the

Table 1. Sociodemographic profile of the respondents (N=171)

Variables	Frequency	Percentage
Age		
18	1	.6
19	3	1.8
20	2	1.2
21	30	17.5
22	48	28.1
23	52	30.4
24	21	12.3
25	2	1.2
26	4	2.3
27	7	4.1
30	1	.6
Year Level		
Freshman	1	.6
Sophomore	26	15.2
Junior	61	35.7
Senior	83	48.5
Living Arrangement		
Living with family	114	66.7
University housing or dormitory	42	24.6
Independently living alone or with friends or non-relatives	15	8.8
Internet Usage per day		
less than 3 hours	13	7.6
3 to 8 hours	47	27.5
8 to 16 hours	99	57.9
16 hours and more	12	7

second influential factor for their internet consumption. As a part of Communications and Information Technology Commission initiative minimum 60,000 Wi-Fi hotspots were provided across the Kingdom of Saudi Arabia at public locations, like malls, hospitals, parks and mosques (Shafprince, 2022). Citizens and residents can freely access internet due to this initiative. Though Saudi's internet subscription ranked 87th out of 120 countries in internet affordability (Freedom House, 2022), it is the least factor that the respondents considered as influencer of their internet consumption. Steady / strong internet connection is the most influential factor among respondents. According to Naar (2020), Saudi Arabia ranked fourth globally in terms of 5G technology and tenth in terms of internet speed. As of May 2022, Saudi Arabia ranked 8 in terms of Mobile internet and ranked 39 in Fixed Broadband worldwide (Speed Global Index, 2022). No wonder why this is the most influential factor in terms of Internet accessibility.

Reasons for using internet was also asked. Boredom garnered as the top reason for using internet, 144 (84%). This supports the findings of separate studies of Li, et. al (2015) & Goldstein, et. al (2016),

Table 2. Factors influencing internet consumption (N=171)

Variables	Frequency	Percentage
Accessibility of internet		
free Wi-fi	159	93
affordable	22	12.9
Steady / strong internet connection	165	96.5
Reasons for using internet		
Isolation	112	65.5
Boredom	144	84.2
free time	62	36.3
weather condition	108	63.2

that boredom is one of the common triggers of intensive Internet use and it is significantly associated with Internet addiction and Internet-related functional impairment. 112 (66%) of the respondents considered isolation as top 2 reason for using internet. In the study of Shehata & Abdeldaim (2021), Internet addiction was strongly attributed to a symptom of depression, isolation, loneliness, or even escapism. Loneliness was associated with Internet use. Lonely users more likely to seek emotional support online and find there (Awad et. al., 2018; Abdel-Salam et. al., 2019). Weather condition, extremely hot on summer season and cold during winter, is the third main reason for using internet (63%). According Al-Khani (2021) harsh weather tend to stay more indoors and seek out internet-related activities among Saudis.

4.2 Pattern of Internet Consumption

A paired-samples t-test was conducted to compare the respondents' internet related activities before and during Covid-19 pandemic. Table 3 shows the result. There was a significant difference in the average sleeping hours before Covid-19 (*M=1.94, SD=.675*) and during Covid-19 (*M=1.77, SD=.617*) conditions; *t(170)=3.460, p= .001*. There was a significant difference in the average internet usage per day before Covid-19 (*M=1.77, SD=.595*) and during Covid-19 (*M=2.74, SD=.580*) conditions; *t(170)=-47.91, p=.000*. There was no significant difference in the dominant times of using internet before Covid-19 (*M=2.77, SD=.797*) and during Covid-19 (*M=2.72, SD=.713*) conditions; *t(170)=.780, p=.437*. There was no significant difference in the log-in status before Covid-19 (*M=1.87, SD=.874*) and during Covid-19 (*M=1.85, SD=.811*) conditions; *t(170)=1.656, p=.100*. These results suggest that there were changes in the pattern of internet related activities among respondents. Specifically, results suggest that Covid-19 pandemic changed the way respondents sleep and their internet usage increases. Previous study conducted by Khubchandani, et. al (2021) found out that there was increase in internet addiction during the Covid-19 pandemic. Covid-19 pandemic adversely impacted Internet use, especially in vulnerable populations (Li, et. al, 2021).

The "uses and gratification theory" of Katz et. al (1974) asserts that people use media to gratify specific wants and needs. The theory has uncovered several motivations people often have for consuming media. These include force of habit, companionship, relaxation, passing the time, escape, and information (Vinney, 2019). An early study published in the journal CyberPsychology & Behavior on uses and gratifications of the internet found seven gratifications for its use: information seeking, aesthetic experience, monetary compensation, diversion, personal status, relationship maintenance, and virtual community (Song et al, 2014). In order to know if there are any differences in the respondents' activities to gratify themselves before and during Covid-19 pandemic, paired-samples t-test was conducted. Table 4 shows the results. There was a significant difference in the learning purpose before Covid-19 (*M=.60, SD=.491*) and during Covid-19 (*M=.88, SD=.329*) conditions;

Table 3. Comparative Internet consumption related variables before and during Covid-19 pandemic (N=171)

Paired Variables	Before / During Covid-19 Pandemic	Mean	Std. Deviation	T	df	Sig. (2-tailed)
Average sleeping hours	Before During	1.94 1.77	.675 .617	3.460	170	.001
Average internet usage per day	Before During	1.77 2.74	.595 .580	-47.91	170	.000
Dominant times for using internet	Before During	2.77 2.72	.797 .713	.780	170	.437
Log-in status	Before During	1.87 1.85	.874 .811	1.656	170	.100

t(170)=-7.058, p=.000. There was a significant difference in the aesthetic purpose before Covid-19 (*M=.67, SD=.473*) and during Covid-19 (*M=.60, SD=.491*) conditions; *t(170)=2.062, p=.041.* There was no significant difference in the monetary purpose before Covid-19 (*M=.28, SD=.451*) and during Covid-19 (*M=.27, SD=.448*) conditions; *t(170)=.179, p=.858.* There was a significant difference in the diversion purpose before Covid-19 (*M=.55, SD=.499*) and during Covid-19 (*M=.47, SD=.501*) conditions; *t(170)=2.049, p=.042.* There was a significant difference in the personal status purpose before Covid-19 (*M=.39, SD=.490*) and during Covid-19 (*M=.29, SD=.456*) conditions; *t(170)=2.853, p=.005.* There was no significant difference in the relationship building purpose before Covid-19 (*M=.48, SD=.501*) and during Covid-19 (*M=.51, SD=.501*) conditions; *t(170)=-1.096, p=.275.* There was no significant difference in the virtual purpose before Covid-19 (*M=.46, SD=.500*) and during Covid-19 (*M=.46, SD=.500*) conditions; *t(170)=.000, p=1.00.* Results suggest that Covid-19 pandemic made some changes in the purposes of using internet among respondents. According to Shehata & Abdeldaim (2021), during the pandemic, accessing online books, completing assignments, and online assessments were highly recommended by universities, teachers, and students. Thus, Internet has become a vital part of distant online classes but increases the dependency of students on the Internet.

4.3 Prevalence of Internet Addiction

The prevalence of Internet addiction among respondents is 160 (93.6%). Table 5 shows the results. 43 (25.1%) of the respondents has a mild level of Internet addiction, 102 (59.6%) are moderately addicted, and 15 (8.8%) are severely addicted to Internet. Only 11 (6.4%) of the respondents are on the normal level of Internet usage. Based on Table 1, 99 (58%) of the respondents spend 8 to 16 hours a day for internet surfing, classified as moderate Internet user but can lead to severe or heavy users. In Table 2, strong internet connection and free access to Wi-Fi are the most influential factor among respondents. Boredom, isolation and weather condition are the 3 main reasons why respondents are using internet. These are the factors that have direct or indirect contributions to prevalence of Internet addiction among respondents.

Correlation analysis was performed to assess the relationship between Internet addiction results and Internet usage per day on the following timeframe: present, before, and during Covid-19 pandemic. Table 6 shows the results. There was a positive linear correlation between Internet usage per day (present time) and Internet addiction test results, *r(169) =.859, p=.000.* There was a positive linear correlation between Internet usage per day (during Covid-19) and Internet addiction test results, *r(169)=.855, p=.000.* There was a positive linear correlation between Internet usage per day (before Covid-19) and Internet addiction test results, *r(169)=.808, p=.000.* Results suggest that the longer the person spend time surfing the internet, the bigger chances of becoming addicted to it. According to the article published in the website of Webroot (2022), excessive usage becomes compulsive internet addiction that interferes with daily activities, relationships, and health. Based on Global Media Insights, almost 98% of the Saudi Arabian population use the internet in 2022. The current

Table 4. Comparative purposes of using internet before and during Covid-19 pandemic (N=171)

Paired Variables	Before / During Covid-19 Pandemic	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
Learning purpose	Before During	.60 .88	.491 .329	-7.058	170	.000
Aesthetic purpose	Before During	.67 .60	.473 .491	2.062	170	.041
Monetary purpose	Before During	.28 .27	.451 .448	.179	170	.858
Diversion purpose	Before During	.55 .47	.499 .501	2.049	170	.042
Personal Status purpose	Before During	.39 .29	.490 .456	2.853	170	.005
Relationship building	Before During	.48 .51	.501 .501	-1.096	170	.275
Virtual Community	Before During	.46 .46	.500 .500	.000	170	1.000

Table 5. Prevalence of internet addiction (N=171)

Internet Addiction Level	Frequency	Percentage
Normal	11	6.4
Mild	43	25.1
Moderate	102	59.6
Severe	15	8.8

Table 6. Internet addiction test result in relation to internet usage per day - present, before, and during Covid-19 pandemic (N=171)

Variable	Present/Before/During Covid-19 Pandemic	Internet Addiction Test Results	
		R	p value
Internet usage per day	Present	.859	.000
	During	.855	.000
	Before	.808	.000

daily average time spent on the Internet by Saudi Arabian people is 8 hours and five minutes (Global Media Insights, 2022).

5. CONCLUSION AND RECOMMENDATION

In reference to the results, the researcher concluded that factors associated or influencing high internet consumption are accessibility, boredom, isolation and extreme weather condition – too hot or cold. Covid-19 pandemic changed the way respondents consume internet. It also changed the respondents' sleeping pattern and increases the average internet usage per day. Though the Internet played a vital

role during Covid-19 pandemic, it also increases the dependency of students on it. Higher number of moderate level internet addiction has been found among respondents.

In relation to the results and conclusion drawn, the following recommendations are hereby offered:

- Jubail University College, specifically Male Branch, is encouraged to address the rising Internet usage of their students by designing a campaign or program or activity that can at least lessen the internet usage if it is not possible to totally eradicate;
- Policy for using internet in the university and dormitories is recommended to be reviewed for possible revision that might include strengthening firewall to block or censor unnecessary website and applications not needed by the students or might just encourage students to spend more time surfing internet;
- Aside from the current psychological tools being used by the University Guidance and Counseling Office, adoption of the IAT assessment tool is also recommended to screen the students who are experiencing discomforts in problematic internet usage;
- On top of the existing guidance and counseling programs offered by the university, additional program specifically addressing internet addiction is also encouraged. It is also suggested that the program should have the following features: emphasis on healthy use of the Internet, understanding the change process in Internet addiction behavior, a directive, client-centered counseling style, adoption of a family perspective, and a multi-level counseling model (individual, family counseling, and a peer support group); and
- A further study is recommended to address the shortcomings and limitations of the study.

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