Dr. Ammar H. Safar   Ms. Noor A. Safar

اضطراب إدمان الإنترنت: دراسة حالة لطلبة المدرسة الأمريكية الدولية الخاصة بدولة الكويت

الملخص: بدلاً من محاولة الدفاع عن والتأكيد على وجود اضطراب الإدمان على الإنترنت (Internet Addiction Disorder (IAD))، ركّزت هذه الدراسة البحثية في فحواها على ظهور بعض الأعراض المُحتملة لدى مُتعلّمي المرحلة الثانوية في مؤسسة تربوية مدرسية دولية خاصة في دولة الكويت، وذلك بالتحرّي والتقصّي والبحث من خلال الاستفسار عن سلوكيّاتهم الروتينية في استخدام الإنترنت، والذي تمّ عن طريق توزيع أداة الدراسة – الاستبيان – على عينة عشوائية عددها 188 متعلّم ومتعلّمة مُقيّدين في المرحلة الثانوية لهذه المدرسة. كشفت نتائج هذه الدراسة البحثية عن ظهور عدة أعراض تتعلق باضطراب الإدمان على الإنترنت (IAD)؛ ومع ذلك، فإنّ مُعظم أعراض سلوكيّات الإدمان التي تمّ اكتشافها وأشارت إليها نتائج الدراسة لم تكن ضارة. وبالإضافة إلى ذلك، كانت المعلومات الديموغرافية بمثابة مُؤشّرات جزئية؛ حيث أكّدت نتائج الدراسة البحثية على وجود فروق بسيطة جداً (لا تكاد تذكر) بين المشاركين تُعزي لمُتغيّر الجنس، أمّا بالنسبة لمُتغيّر المرحلة التعليمية فقد أشارت النتائج إلى وجود ارتباط إيجابي بأعباء العمل المنخفضة ومستويات الإجهاد المنخفض مع زيادة استخدام الإنترنت.

الكلمات المفتاحية: الإدمان على الإنترنت، اضطراب الإدمان على الإنترنت، اضطراب استخدام الإنترنت، الاضطرابات المتصلة بالإنترنت، الاستخدام السلبي أو المرضي للإنترنت، الإدمان الشبكي، إدمان تكنولوجيا المعلومات والاتّصالات، الأعراض النفسية، السلوكيات المسببة للإدمان، المراهقين، طلبة المرحلة الثانوية، المدرسة الأمريكية الدولية الخاصة، دولة الكويت

Internet Addiction Disorder: A Case Study of a Private American International School Students in the State of Kuwait

Dr. Ammar H. Safar, Ph.D. (Corresponding Author)

Department of Curriculum and Teaching Methods, College of Education, Kuwait University, Kaifan, the State of Kuwait

Ms. Noor A. Safar (Co-Author)

Department of Chemistry and Biochemistry, Sixth College, University of California San Diego, San Diego, California, USA

Abstract: Rather than attempting to defend the existence of Internet Addiction Disorder (IAD)—or the title's validity—this research study focused on the appearance of potential symptoms in the high school student population at a private international educational institution in the State of Kuwait by inquiring about their routine Internet usage behaviors. Through the distribution of an anonymous questionnaire to 188 high school students, the study revealed the emergence of several symptoms related to IAD; however, most of the addictive behaviors reported were not detrimental. In addition, demographic information acted as partial indicators: gender was trivial, while grade level presented new information that positively correlated low workloads and low stress levels with increased Internet usage.

behaviors, adolescents, high school students, private international American school, State of Kuwait

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المقالة I.   Introduction

The advent of powerful, affordable computers and the removal of commercial restrictions in the 1990s instigated the rapid commercialization and global expansion of the Internet. However, the overarching repercussion of this escalation—Internet addiction—has been unprecedented. The obsessive use of this medium surfaced due to its accessible format, affordability, and guaranteed anonymity, which resulted in people spending copious amounts of time in unreserved online sessions (Kuss, Griffiths, & Binder, 2013; Topaloglu & Topaloglu, 2015).

In 1994, psychologist Dr. Kimberly Young published a research study that included a tool/questionnaire that claimed to assess Internet users' online behaviors by comparing their behaviors to the actions of compulsive gamblers. This "pet project", which consisted of 600 case studies of so-called victims of IAD, who "suffered from

relationship problems, academic problems, financial problems, and job loss", became the first study in the field and established Dr. Young as a pioneer in IAD research (Young, 2017).

المقالة II.   Problem statement

The research problem of this study can be stated as "There is a need to explore the extension of IAD among high school students in a private international American school in the State of Kuwait and discovering the relation of IAD and some independent variables (i.e., gender, grade level, and GPA)". So, the main research question was formulated as: To what extent do the routine Internet usage behaviors of high school students, aged 14-18, at a private international American school in the State of Kuwait reveal symptoms of IAD?

المقالة III.   Objectives of the study

This research aimed of knowing:
1. The extension of IAD among students.
2. The relationship between IAD and gender, grade level, and GPA.
3. The Ministry of Education actions towards IAD.

المقالة IV.   Assumptions and delimitations of the study

This research hypothesized that the routine Internet usage behaviors of high school students, aged 14-18, at an international American school in the State of Kuwait will show that these students suffer from some symptoms of IAD. The delimitations of this research study can be classified as

follows: (1) the human limitation, i.e., the students, aged 14-18, being at the high school level; (2) the spatial limitation, as the study was confined to a private international American school in the State of Kuwait; (3) the time limitation, as the study was conducted during the second semester of the 2015–2016 academic year; and (4) the literature limitation, as the results of a search for reliable sources clearly revealed the scarcity of educational research on this topic in Kuwait (locally) and in the Gulf Cooperation Council (GCC) and the Middle East (regionally)—a research gap that can be assumed to stem from the sensitivity of the topic under investigation.

المقالة V.   Significance of the study

Due to the substantial integration of and reliance on the Internet for the completion of daily endeavors, the proliferation of IAD has drastically escalated. Its expansion is further enabled by the lack of awareness of the Internet's addictive qualities within the consumption-driven populace, the perpetual self-denial of the presence of impulse control issues with regard to the Internet, and the lack of recognition of IAD and associated negligence within the medical community. Although more individuals, and even some countries (e.g., South Korea), have recently taken the initiative to prioritize IAD and push for its validation as a condition, an equal number argue the opposite, believing that an accurate definition of IAD would characterize it as a subtype of pre-established disorders, such as depression and obsessive compulsive disorder (OCD), rather than as a separate disorder.

Although some may argue that the ambiguous definition of IAD should not prevent its treatment, the reality

is that clear medical identification is necessary if the field wishes to ultimately gain validation to advance its method(s) of research and implement "remedies". As such, this epidemic's lasting impacts are clearly manifested in those who suffer from the addiction, particularly adolescent students (aged 14-18), as most school curricula seem to be oriented around the extensive Internet use at home and during class to help students complete assignments, which establishes a dependency. The ramifications of this disorder can be severe; statistics indicate that more than 50% of IAD cases are generated by pre-existing pathologies to subsequent devastating episodes, such as the 2003 incident in Japan in which 34 people died as part of an Internet suicide pact (Saliceti, 2015, p. 1375). In addition to dependence on the Internet facilitated by modern culture, another possible cause of the widespread nature of IAD is societal reinforcement: the Internet is frequently perceived as a form of escapism from existential problems. Users consider the Internet to be a canvas on which they can "create their own world…seeking refuge in [a] virtual world"; it is a coping mechanism to overcome difficulties in life, "altering [users'] temporal experience" (Saliceti, 2015, p. 1374) and instilling a sense of attachment to the insentient.

Researchers have noted that, in addition to the apparent disagreement in the field regarding the classification of IAD as an isolated disorder, a knowledge gap exists in how to express IAD symptoms in Middle Eastern schools and whether the current reliance on school environments and the societally valued concept of an "extravagant life" has a definite influence on IAD. To address this gap in knowledge, we randomly distributed an anonymous questionnaire survey to students at each grade level of a private international American high school in the State of Kuwait to clarify the existence of IAD symptoms in these students and to evaluate their Internet usage behaviors.

المقالة VI. Literature review

المقطع 6.01 *Definition and classification of IAD*

Addiction is defined as mental and physical regression, prompted by changes in behavior, which manifests in the gradual deterioration of mental wellbeing, the weakening of physical health, or social interference (Douglas et al., 2008; Saliceti, 2015; Shaw & Black, 2008). Features referred to as distinctive elements—frequency, duration, intensity, withdrawal symptoms, and relapse— illustrate an individual's relationship with the habit and allow the detection of at-stake IAD behavior. Current research has amassed a number of terms to describe this compulsive conduct—from the understated, standard "Internet addiction" to "pathological Internet use" and "problematic Internet use".

This terminological ambiguity impedes the validation of IAD because of the lack of a standard mental health professional classification, such as the Diagnostic and Statistical Manual of Mental Disorder (DSM-IV)—a handbook published by the American Psychology Association that provides standard criteria for the classification of mental disorders—and incongruities in diagnostic methods (Beard & Wolf, 2001; Douglas et al., 2008; Jeong, Kim, Yum, & Hwang, 2016; Ko et al., 2009; Saliceti, 2015). However, the elementary understanding stems from a description of Internet addiction as "a syndrome of intense preoccupation with using the Internet" (Yellowlees & Marks, 2007, p. 1448), while IAD highlights an individual's "use of the Internet that creates psychological, social, school, and/or work difficulties" (Beard & Wolf, 2001, p. 377). Although the original motive

for coining the term "IAD" was to parody the DSM-IV criteria for compulsive gambling (Beard & Wolf, 2001), and despite the controversy associated with the term's use in the scholarly field, the present research utilizes this label because it recognizes Internet addiction (IA) as a pathology associated with information and communication technology (ICT) (Sariyska et al., 2014).

المقطع 6.02   *Biological vulnerabilities*

Behaviors evolve into addictions when "a combination of sites in the brain", collectively identified as the "reward center", are stimulated (Cash, Rae, Steel, & Winkler, 2012). Subsequently, the brain experiences an increase in the production of neurochemicals, organic molecules that partake in neural activity, which results in a cerebral association between the activity and pleasure. The Internet has been linked to this cerebral association, as its usage has been noted to release dopamine in the nucleus accumbens (NAc or NAcc), a reward structure in the brain that is linked to addiction. Over time, these receptors have the potential to develop a higher tolerance, which then requires an increase in reward center stimulation to obtain previous levels of pleasure (Cash et al., 2012).

This increased stimulation intensifies the behavior, leading to repetitive usage, which has been found to neurologically alter perceptions of satisfaction in both adolescents and adults due to changes in the prefrontal cortex. The prefrontal cortex is a brain region that is vulnerable to lesions (i.e., damaged regions in an organ or tissue) that induce a variety of symptoms (Kolb & Whishaw, 2009), thereby suggesting a biological mechanism for IAD (Douglas et al., 2008; Saliceti, 2015; Young, 2017). These changes to the prefrontal lobe alter frontal lobe development, which occurs from puberty to the mid-twenties and largely

determines an individual's personality due to its involvement in characteristics such as initiation and judgment and in motor function, memory language, social behavior, and impulse control (Lin et al., 2012; Weng et al., 2013; Yuan et al., 2011). Furthermore, the increase in screen time associated with IAD could cause subtle brain damage such as gray matter atrophy and weakened white matter integrity.

Multiple IA studies have revealed shrinkage in gray matter regions (which process muscle control, sensory perception, speech, and emotions), thus affecting the frontal lobe and impairing the execution of organizational functions (e.g., planning and prioritization) and impulse control (Weng et al., 2013; Yuan et al., 2011). The loss of white matter (which connects gray matter areas) integrity creates "spotty" white matter, resulting in the loss of cerebral communication between lobes of the same hemisphere and between the left (i.e., cognitive: logic, language, and science) and right (i.e., intuitive: emotion, survival, and creativity) hemispheres (Lin et al., 2012; Weng et al., 2013; Yuan et al., 2011).

المقطع 6.03   *Advancement of technology*

ICT tools and services (e.g., PCs, tablets, smartphones, and the Internet) have become essential means of communication in the twenty-first century, particularly due to their contributions to academic success (Salehan & Negahban, 2013). With rigorous curricula that require prolonged Internet use in class and at home to complete assignments, students' study habits have established deceptively innocuous dependencies. Students have the options of supervising their Internet use, seeking assistance to curb their reliance on the Internet, or isolating themselves within their nascent depression, anxiety, or despair and

thereby worsening their condition.

In 2002, Elizabeth Tindle, a psychologist and counselor at Queensland University of Technology, attempted to examine the correlation between the underperformance of university students and academic procrastination through a meta-analysis of case studies conducted in Australian and other Western universities over a ten-year period. Students who sought help from counseling services through the institution's facilities were shown to refer to their behavior as "obsessive use of their PC for other than university work" (Tindle, 2002), signifying an awareness among those afflicted with IAD; in addition, apathy toward course work was found to be a direct result of a lack of social support. Tindle thus concluded that those in denial about their use of technology to avoid or postpone obligations are dissatisfied in life and that their refusal to accept assistance thereby renders them incapable of completing basic daily functions.

However, a 2011 study conducted by Hatice Odaci, a counselor at Karadeniz Technical University, viewed the widespread Internet use within educational institutions as a substantive teaching and learning resource when utilized appropriately. Odaci surveyed 398 students at Karadeniz Technical University to investigate the legitimacy of self-efficacy—academic confidence—and academic procrastination as predictors of eventual problematic Internet use. A student's inflation of his or her scholastic abilities was found to contribute more to IAD than academic procrastination (Odaci, 2011).

The aforementioned studies draw uncertain conclusions regarding the implications of the expansion of technology into daily life on school campuses. Whether Internet use in the classroom represents a revolutionary educational tool or a seed of addiction comes down to one factor: the regulation of Internet use.

المقطع 6.04   Adolescents

The growth of the Internet has exponentially increased youth exposure to media. With the boom of social media sites designed to attract younger demographics and services such as free and unlimited Internet offered in particular locations (e.g., college campuses), youth have become susceptible to the addictive qualities of these platforms. This opportunity for individuals to present idealized versions of themselves online encourages vicarious experiences through their online personas, as they are able to "explore alternatives to their current ego or self-perceptions" (Israelashvili, Kim, & Bukobza, 2012, p. 418).

This appeal stems from the unreserved expression and communication that facilitates the development of meaningful interpersonal relationships between users, which then reinforces the idea that "[a]dolescents' beliefs and perceptions about themselves reflect in their behavior characteristics" while online (Aydin & Sari, 2011, p. 3500). Consequently, the value placed on social media has contributed to adolescents seeking validation of their self-worth from online feedback, utilizing the medium to obtain self-gratification from others. When the desired reaction is not obtained, the opposite occurs (that is, a loss of self-worth). To examine the impact of self-esteem on adolescent IA, Aydin and Sari (2011) analyzed questionnaire responses from 324 high school seniors (aged 16 to 18) from Trabzon, Turkey. Self-esteem, social esteem, and familial esteem were shown to have significant negative correlations with IA, thus revealing that a lack of one or more types of esteem could potentially result in IAD tendencies due to individuals' lack of confidence in judging themselves, their social interactions, and their domestic relationships.

Facebook is a prime example. With over 829 million active users, Facebook has become an online hub of social interaction, connection, and communication. In a 2015 study, a group of researchers, including psychologists Agata Błachnio, Aneta Przepiórka, and Igor Pantic, examined the relationship between Internet usage, depression, and Facebook intrusion—i.e., a deep engagement in Facebook that leads to a perpetual cycle of withdrawal, relapse and reinstatement, and euphoria. In their cross-sectional study, 672 Facebook users completed two questionnaires with items about their demographics and daily Internet use. Depression was discovered to be a predictor of Facebook intrusion, particularly among young males who spent prolonged periods online (Błachnio, Przepiórka, & Pantic, 2015).

Prevalence   المقطع 6.05

Despite the findings in the field, the prioritization of IAD research continues to differ considerably across the globe. Whereas China, Korea, and Taiwan dominated IAD research in the early 2000s, Western perceptions of Internet use experienced a more gradual shift due to concerns about unequal computer access rather than the threat of increasing IAD cases (Griffiths, Kuss, Billieux, & Pontes, 2016). However, the seriousness of IAD cases indicated that this pathological behavior was an issue that extended beyond national and regional borders. By the late 2000s, a preponderance of studies in the field were published from China, Korea, and Taiwan, which began implementing prevention programs and treatment methods, including national screening days in school programs and inpatient facilities, to identify "at-risk" individuals with IAD tendencies (Young, 2017).

These distinct approaches have created recent discrepancies between the results of reported rates of IAD, varying between 0.3% and 38%, which is attributable to differences in diagnostic criteria, questionnaire assessment tools, cultural influences, and the use of selective samples. For instance, reported IAD rates from the U.S. and Europe range between approximately 1.5% and 8.2% and 6% and 18.5%, respectively (Cash et al., 2012).

المقطع 6.06   Knowledge gap

In sum, previous research demonstrates the apparent existence of IAD when considering the biological, technological, and social ramifications. Knowledge of the logistics surrounding the development of addiction—presented as a behavioral augmentation to stimulate the reward center—verifies IA by recognizing the link between Internet usage and the release of dopamine, a neurochemical associated with pleasure. Therefore, maladaptive Internet use can modify the prefrontal cortex and hinder impulse control because of its recognition as a source of instant gratification. Coupled with the industrial progression of technology, the availability of inexpensive devices that supply this source of pleasure has resulted in ubiquitous Internet use in professional and recreational life.

For this reason, the optimal condition for examining IAD symptoms would be in a high school environment, with students aged 14-18. Adolescents, who are undergoing a formative period of development, adhere to stringent school curricula that are aligned with extensive Internet use, thereby facilitating their dependency on this medium. In conjunction with the expansion of the Internet, this dependency is intensified with adolescents' exposure to social media sites

that cater to their demographic, with offers of uninhibited individualistic expression, communication, and the creation of interpersonal relationships. To pinpoint the onset of IA, priorities must change to address the implications of adolescents' exposure to the Internet, and the geographic pool of research must expand to include countries outside Western Europe and East Asia (Tindle, 2002; Young, 2017). As such, our research sought to examine the routine Internet use behaviors of high school students (aged 14-18) at a private international American school in the State of Kuwait and to assess any existing parallels to symptoms of IAD.

المقالة VII.   Methodology

المقطع 7.01   *Research design*

This research is an exploratory cross-sectional and correlational study. The elected research design aligns with previous cross-sectional and correlational studies, as it presents an exploratory approach, a non-experimental design, and mixed method data. As cross-sectional research studies involve the collection and analysis of observable data from a representative subset and correlational studies highlight the implied relationship between variables, an exploratory approach that attempts to investigate a component of IAD and to expose the emerging themes in the results of previous research is the most implemented method in the discipline (Aydin & Sari, 2011; Błachnio et al., 2015; Creswell, 2014; Levin, Fox, & Forde, 2013; Odaci, 2011).

The employment of a non-experimental design, which solely relies on interpreting responses, was selected to emphasize the parallels between usage behaviors and IAD symptoms. An experimental design that incorporates a cause-and-effect relationship in an experiment by instigating

changes in a controlled environment would be unfeasible due to time constraints, participant availability, and, most importantly, its inconsistency with the research objective: an analysis of unadulterated behaviors (Creswell, 2014; Healey, 2016; Jackson, 2016; Levin et al., 2013).

<div dir="rtl">المقطع 7.02</div> *Instrument*

The assessment tool incorporated in the questionnaire to identify symptoms of IAD was derived from the Internet Addiction Test (IAT)—developed by Dr. Young—and edited in order to be compliance with the Kuwaiti society. The original instrument consists of 20 items that measure the severity of IA based on a Likert scale—a measurement that requires respondents to evaluate a statement on a graduated system that corresponds to a level of agreement. Each statement on the IAT scale corresponds to a number (0: Does not apply - 5: Always); these points are then tallied for an overall score. The points accumulated fall within three ranges: 24-49 points, 50-70 points, and 80-100 points. While those who score on the lower end of the spectrum are classified as average Internet users, those on the higher end are either experiencing occasional issues or their usage is a definite source of problems (Young, 2017).

However, the system used in this study incorporated five statements (i.e., Rarely or never, Every once in a while, Sometimes, Often, and Always) in a multiple-choice format to respond to the selected items from the IAT. Several questions (3, 4, 7, 10, 12, 13, and 16) were omitted due to either their irrelevancy within the population (e.g., How often do you prefer the excitement of the Internet to intimacy with your partner?) or their restriction by authority figures who deemed them inappropriate (e.g., How often do you

block out disturbing thoughts about your life with soothing thoughts of the Internet?). With the elimination of seven questions, only thirteen could be implemented in this study's survey, and, as a result, the IAT scale range could not be accurately reflected in the results. Six more questions were added to the study's questionnaire for a total of 19 items. The responses to these questions were used to authenticate the presence of particular symptoms. These indicators were based on the DSM-IV's criteria for substance dependence: (1) Tolerance; (2) Withdrawal; (3) Unintentional excessive use over a longer period; (4) Inability to control or minimize use; (5) Exorbitant amount of time spent in the acquisition, use, and recovery process; (6) Reduction of social, occupational, and recreational activities; and (7) Continuous use (Tindle, 2002).

Sample   المقطع 7.03

A sample of 188 high school students enrolled at a private international American school in the State of Kuwait (i.e., 102 female and 86 male) participated in this study. The sample represented various ethnic and academic backgrounds. The recruitment of the convenient sample was executed using two means. First, the survey was distributed to students via personal contact information; then, the "snowball sampling" selection technique was used, whereby study subjects recruited future participants by distributing the survey among acquaintances—an approach often utilized in sociological and statistical research (Błachnio et al., 2015).

To generate an adequate amount of data, the second collection process involved introducing the survey in classrooms through instructor reinforcement. While most instructors simply drew students' attention to the flyer that called for all students' participation in a "high school-wide

survey" to reflect on individual Internet behavior, some offered extra credit as an incentive for students to complete the survey. Informed consent was obtained beforehand and required participants to agree to the conditions before continuing with the questionnaire. In the detailed introduction, participants were informed of the study's purpose and content and were ensured anonymity. After providing their consent, the consent form was electronically recorded alongside their survey responses.

المقطع 7.04   *Data collection*

At the beginning of the spring semester of the 2015–2016 academic year (i.e., between February 2016 and March 2016), the researchers electronically distributed/circulated an anonymous online questionnaire to 188 students (102 female and 86 male) at a private international American school in the State of Kuwait. This method of data collection was preferable due to the field's dependence on it as a valid data source, as previous research conducted in educational institutions have relied on surveys (Aydin & Sari, 2011).

Before beginning the survey, each participant was required to agree to the conditions outlined in the consent form. The survey was divided into two sections. The first asked the participants to answer demographic questions that pertained to their gender, grade level, and grade point average (GPA) to determine what populations demonstrated the most symptoms of addiction. Other demographic questions, such as ethnicity and academic backgrounds, were omitted by the school's administration who deemed them inappropriate. Next, the form covered a mix of open-ended and closed-ended questions that implicitly detailed the students' Internet usage, such as the number of hours spent

on the Internet on different devices and the purpose of their Internet use, which later helped to identify the different types of Internet behaviors present in the student body.

Google Forms was used to create, distribute, and organize the survey/questionnaire, which allowed for immediate access to the results in a simple and structured fashion, as the application provided both a summary and in-depth analysis of the responses. In addition, the data analysis is quantified to better illustrate the discovered correlations within specific demographics and other independent variables.

المقطع 7.05   *Methods of analysis*

Several means of analysis were applied to examine the collected data. Namely, frequencies and percentages were the descriptive analysis methods used.

المقطع 7.06   *Data analysis: results and discussion*

The findings of this research study were consistent with the results of other studies (presented throughout this document) conducted over the past 5–10 years and with the assumptions initially postulated. The results indicated that high school students showed minor IAD symptoms, such as lack of sleep or prolonged sessions of Internet usage; however, their behaviors did not appear to cause severe interference. Table 1 and Table 2 show the results obtained in this study.

Table 1. *Participants' Demographic Information*

Variable	Category	*N*	%
Gender	Male	86	45.7

		Female	102	54.3
Grade level	9th	grade (freshman)	27	14.4
	10th	grade (sophomore)	13	6.9
	11th	grade (junior)	98	52.1
	12th	grade (senior)	50	26.6
GPA		High honor roll	58	30.9
		Honor roll	58	30.9
		Below honor roll	72	38.3

Table 2. *Participants' Responses to the Questionnaire*

Questions	Category	*N*	%
Q1. About how many hours per day do you spend on the Internet?	<1 hour	2	1.1
	1–2 hours	26	13.8
	3–5 hours	82	43.6
	6–9 hours	52	27.7
	>9 hours	26	13.8
Q2. Which of the following devices do you use the most each day?	PC	46	24.5
	Tablet	3	1.6
	Smartphone	139	73.9
Q3. About how many hours per day do you spend on these devices?	<1 hour	1	0.5
	1–2 hours	26	13.8
	3–5 hours	84	44.7
	6–9 hours	59	31.4
	>9 hours	18	9.6
Q4. What type of websites/apps do you typically spend most of your time on?	Academic	19	10.1
	Entertainment	58	30.9
	Social media	111	59.0

Q5. Which social media website/app do you spend most of your time on?	Facebook	10	5.3
	Twitter	4	2.1
	Tumblr	6	3.2
	Google +	0	0.0
	YouTube	44	23.4
	Instagram	16	8.5
	WhatsApp	69	36.7
	Snapchat	33	17.6
	Vine	0	0.0
	Other	6	3.2
Q6. About how many hours per day do you spend on that website/app?	<1 hour	25	13.3
	1–2 hours	70	37.2
	3–5 hours	71	37.8
	6–9 hours	12	6.4
	>9 hours	10	5.3
Q7. Generally, how would you describe your Internet/technology/ICT usage?	Infrequent user	1	0.5
	Moderate user	110	58.5
	Excessive user	77	41.0
Q8. Do you find yourself staying online longer than you expected?	Rarely or never	14	7.4
	Every once in a while	30	16.0
	Sometimes	63	33.5
	Often	44	23.4
	Always	37	19.7
Q9. Do you find yourself neglecting responsibilities (e.g., chores) to spend more time online?	Rarely or never	34	18.1
	Every once in a while	41	21.8
	Sometimes	65	34.6
	Often	34	18.1
	Always	14	7.4
Q10. Do people in your life complain to you about the amount of time that you spend online?	Rarely or never	50	26.6
	Every once in a while	50	26.6
	Sometimes	42	22.3
	Often	22	11.7

	Always	24	12.8
Q11. Does your work suffer because of the amount of time that you spend online (e.g., postponing things or missing deadlines)?	Rarely or never	70	37.2
	Every once in a while	41	21.8
	Sometimes	43	22.9
	Often	22	11.7
	Always	12	6.4

Table 2. *Participants' Responses to the Questionnaire (Continued)*

Questions	Category	*N*	%
Q12. Does your job performance or productivity suffer because of the Internet?	Rarely or never	71	37.8
	Every once in a while	45	23.9
	Sometimes	38	20.2
	Often	25	13.3
	Always	9	4.8
Q13. Do you find yourself anticipating when you will go online again?	Rarely or never	57	30.3
	Every once in a while	42	22.3
	Sometimes	51	27.1
	Often	28	14.9
	Always	10	5.3
Q14. Do you lose sleep due to late-night Internet use?	Rarely or never	43	22.9
	Every once in a while	33	17.6
	Sometimes	48	25.5
	Often	33	17.6
	Always	31	16.5
Q15. Do you feel preoccupied with the Internet when not online or fantasize about being	Rarely or never	88	46.8
	Every once in a while	44	23.4
	Sometimes	42	22.3

online?	Often	10	5.3
	Always	4	2.1
Q16. Do you try to reduce the amount of time that you spend online and fail?	Rarely or never	71	37.8
	Every once in a while	41	21.8
	Sometimes	40	21.3
	Often	27	14.4
	Always	9	4.8
Q17. Do you attempt to hide how long you have been online?	Rarely or never	111	59.0
	Every once in a while	30	16.0
	Sometimes	29	15.4
	Often	11	5.9
	Always	7	3.7
Q18. Do you choose to spend more time online instead of spending time out with others?	Rarely or never	106	56.4
	Every once in a while	37	19.7
	Sometimes	34	18.1
	Often	8	4.3
	Always	3	1.6
Q19. Do you feel depressed, moody, or nervous when you are not online, and do these feelings go away when you go back online?	Rarely or never	130	69.1
	Every once in a while	25	13.3
	Sometimes	23	12.2
	Often	6	3.2
	Always	4	2.1

Below is a presentation and discussion of the results obtained in this study based on gender, grade level, and GPA perspectives.

(a) Gender

This research study included 86 male participants (45.7%) and 102 female participants (54.3%). The school's

administration provided an insufficient timeframe allowed for data collection (i.e., approximately one month), which contributed to the preponderance of female subjects. Despite the imbalance in the stratified variable groupings, the results are not negligible, as they reflect the given situation.

Of the 86 male student participants, 45.3% reported spending three to five hours per day on the Internet. Sixty-four percent used their smartphones over other ICT devices, and 48.8% spent three to five hours on their preferred ICT device. A high proportion of male participants (47.7%) used the Internet for social media purposes, and the most visited sites were YouTube, a video streaming site that was reported by 34.9% of the participants, and WhatsApp, a messaging application that came in a close second with 33.7%. The number of hours spent on the aforementioned sites was split evenly between three to five and one to two hours (40.7% each). In addition, 62.8% described their Internet usage as moderate; 37.2% sometimes felt that their sessions were unexpectedly prolonged; 33% sometimes felt that they neglected responsibilities; and 24.4% sometimes felt that they lost sleep due to Internet use. However, most participants reported rarely or never postponing their work or their work suffering due to Internet usage; a loss of job productivity; anticipation or preoccupation with going online; failure to control their usage causing embarrassment; prioritization of Internet use over physical social interaction; or use of the Internet to address depression or anxiety.

The 102 female students responded similarly. For instance, 42.2% reported spending three to five hours on the Internet; 82.4% used their smartphones daily, while 41.2% spent three to five hours on their preferred electronic device; and 68.6% typically visited social media websites during their online sessions. WhatsApp was the most used

application (39.2%), and 35.3% of the participants used it for three to five hours per day. These findings indicate that gender does not preemptively detect IAD symptoms, thus implying that susceptibility to IAD is not determined by gender. Such results contradict the findings reported by Laconi, Tricard, and Chabrol (2015), but this contradiction can be attributed to differences in sample size (n = 378) and participant age range (18–65 years old). However, the findings of this research are consistent with the results found in most studies (Dalbudak, Evren, Aldemir, & Evren, 2014; Douglas et al., 2008; Hawi, 2012). These findings reveal the existence of alternative individual variables that may influence one's relationship to the Internet (Błachnio et al., 2015; Li, Dang, Zhang, Zhang, & Guo, 2014). Table 3 and Table 4 show the results of this analysis.

Table 3. *Participants' Demographic Information by Gender*

Variable	Category	Male		Female	
		N	%	*N*	%
Grade level	9th grade (freshman)	11	12.8	16	15.7
	10th grade (sophomore)	5	5.8	8	7.8
	11th grade (junior)	43	50.0	55	53.9
	12th grade (senior)	27	31.4	23	22.5
GPA	High honor roll	16	18.6	42	41.2
	Honor roll	26	30.2	32	31.4
	Below honor roll	44	51.2	28	27.5

Table 4. *Participants' Responses to the Questionnaire by Gender*

Questions	Category	Male		Female	
		N	%	*N*	%
Q1. About how many	<1 hour	1	1.2	1	1.0

hours per day do you spend on the Internet?	1–2 hours	15	17.4	11	10.8
	3–5 hours	39	45.3	43	42.2
	6–9 hours	23	26.7	29	28.4
	>9 hours	8	9.3	18	17.6
Q2. Which of the following devices do you use the most each day?	PC	30	34.9	16	15.7
	Tablet	1	1.2	2	2.0
	Smartphone	55	64.0	84	82.4
Q3. About how many hours per day do you spend on these devices?	<1 hour	0	0.0	1	1.0
	1–2 hours	14	16.3	12	11.8
	3–5 hours	42	48.8	42	41.2
	6–9 hours	26	30.2	33	32.4
	>9 hours	4	4.7	14	13.7
Q4. What type of websites/apps do you typically spend most of your time on?	Academic	13	15.1	6	5.9
	Entertainment	32	37.2	26	25.5
	Social media	41	47.7	70	68.6

Table 4. *Participants' Responses to the Questionnaire by Gender (Continued)*

Questions	Category	Male		Female	
		N	%	*N*	%
Q5. Which social media website/app do you spend most of your time on?	Facebook	6	7.0	4	3.9
	Twitter	1	1.2	3	2.9
	Tumblr	0	0.0	6	5.9
	Google +	0	0.0	0	0.0
	YouTube	30	34.9	14	13.7
	Instagram	7	8.1	9	8.8
	WhatsApp	29	33.7	40	39.2
	Snapchat	11	12.8	22	21.6
	Vine	0	0.0	0	0.0
	Other	2	2.3	4	3.9
Q6. About how many hours per day do you	<1 hour	13	15.1	12	11.8
	1–2 hours	35	40.7	35	34.3

spend on that website/app?	3–5 hours	35	40.7	36	35.3
	6–9 hours	1	1.2	11	10.8
	>9 hours	2	2.3	8	7.8
Q7. Generally, how would you describe your Internet/technology/ICT usage?	Infrequent user	1	1.2	0	0.0
	Moderate user	54	62.8	56	54.9
	Excessive user	31	36.0	46	45.1
Q8. Do you find yourself staying online longer than you expected?	Rarely or never	6	7.0	8	7.8
	Every once in a while	16	18.6	14	13.7
	Sometimes	32	37.2	31	30.4
	Often	23	26.7	21	20.6
	Always	9	10.5	28	27.5
Q9. Do you find yourself neglecting responsibilities (e.g., chores) to spend more time online?	Rarely or never	16	18.6	18	17.6
	Every once in a while	18	20.9	23	22.5
	Sometimes	33	38.4	32	31.4
	Often	15	17.4	19	18.6
	Always	4	4.7	10	9.8
Q10. Do people in your life complain to you about the amount of time that you spend online?	Rarely or never	21	24.4	29	28.4
	Every once in a while	25	29.1	25	24.5
	Sometimes	18	20.1	24	23.5
	Often	13	15.1	9	8.8
	Always	9	10.5	15	14.7
Q11. Does your work suffer because of the amount of time that you spend online (e.g., postponing things or missing deadlines)?	Rarely or never	27	31.4	43	42.2
	Every once in a while	20	23.3	21	20.6
	Sometimes	20	23.3	23	22.5
	Often	12	14.0	10	9.8
	Always	7	8.1	5	4.9

Questions	Category	Male N	Male %	Female N	Female %
Q12. Does your job performance or productivity suffer because of the Internet?	Rarely or never	33	38.4	38	37.3
	Every once in a while	15	17.4	30	29.4
	Sometimes	22	25.6	16	15.7
	Often	9	10.5	16	15.7
	Always	7	8.1	2	2.0
Q13. Do you find yourself anticipating when you will go online again?	Rarely or never	26	30.2	31	30.4
	Every once in a while	19	22.1	23	22.5
	Sometimes	22	25.6	29	28.4
	Often	14	16.3	14	13.7
	Always	5	5.8	5	4.9
Q14. Do you lose sleep due to late-night Internet use?	Rarely or never	20	23.3	23	22.5
	Every once in a while	10	11.6	23	22.5
	Sometimes	21	24.4	27	26.5
	Often	17	19.8	16	15.7
	Always	18	20.9	13	12.7

Table 4. *Participants' Responses to the Questionnaire by Gender (Continued)*

Questions	Category	Male		Female	
		N	%	N	%
Q15. Do you feel preoccupied with the Internet when not online or fantasize about being online?	Rarely or never	39	45.3	49	48.0
	Every once in a while	17	19.8	27	26.5
	Sometimes	22	25.6	20	19.6
	Often	7	8.1	3	2.9
	Always	1	1.2	3	2.9

Q16. Do you try to reduce the amount of time that you spend online and fail?	Rarely or never	35	40.7	36	35.3
	Every once in a while	15	17.4	26	25.5
	Sometimes	19	22.1	21	20.6
	Often	15	17.4	12	11.8
	Always	2	2.3	7	6.9
Q17. Do you attempt to hide how long you have been online?	Rarely or never	46	53.5	65	63.7
	Every once in a while	16	18.6	14	13.7
	Sometimes	15	17.4	14	13.7
	Often	5	5.8	6	5.9
	Always	4	4.7	3	2.9
Q18. Do you choose to spend more time online instead of spending time out with others?	Rarely or never	48	55.8	58	56.9
	Every once in a while	18	20.9	19	18.6
	Sometimes	14	16.3	20	19.6
	Often	4	4.7	4	3.9
	Always	2	2.3	1	1.0
Q19. Do you feel depressed, moody, or nervous when you are not online, and do these feelings go away when you go back online?	Rarely or never	60	69.8	70	68.6
	Every once in a while	8	9.3	17	16.7
	Sometimes	10	11.6	13	12.7
	Often	4	4.7	2	2.0
	Always	4	4.7	0	0.0

(b) Grade level

A total of 27 freshmen (9th grade) (14.4%), 13 sophomores (10th grade) (6.9%), 98 juniors (11th grade)

(52.1%), and 50 seniors (12th grade) (26.6%) participated in this research study. While the survey gathered responses from 188 willing participants, the results indicated a large disparity between the desired demographics represented. In addition to a lack of responses from freshmen and sophomores—due to indifference or ignorance of the research—juniors provided an overwhelming response compared with that of seniors. The greater number of 11th grade and 12th grade teachers to whom the research was conveyed, which bolstered instructor enforcement, may explain the comparatively lackluster participation of freshmen and sophomores. In addition, the underclassmen's lack of familiarity acted as a deterrent, especially because they were not offered incentives, which decreased participant availability in these grades.

The majority of the 27 freshmen and 98 juniors left similar responses to those indicated for the previous variable (i.e., gender), demonstrating a trend within the student population. The representative sample seemingly consisted of students who displayed minor IAD symptoms, such as lack of sleep or prolonged sessions of Internet usage; however, their behaviors did not result in severe interference. However, surprisingly, the responses of the 13 sophomore presented new data because, when asked to reflect on their Internet practices and the influence of Internet use on their fulfilment of responsibilities, "sometimes" and "often" responses were tied at 30.8%. When asked about whether individuals in their personal lives had criticized their online sessions, 46.2% reported that such criticism occurred often. Loss of productivity was split between every once in a while and often at 30.8%. More sophomores chose "often" when detailing their usage behaviors, which implies that they have acclimated to the high school environment, unlike

inexperienced freshmen, and that they have yet to experience the substantial pressures of the junior year (e.g., standardized testing and a heavier workload).

Furthermore, the 50 seniors had the most equal male to female ratio (27 to 23), and, when asked to define their Internet usage, 52% believed that they were excessive users. These results suggest that, while exposure to the Internet influences adolescents' Internet use, another significant factor is their desire to fulfill expectations and pressure to succeed in a competitive atmosphere. Table 5 and Table 6 show the results of this analysis.

Table 5. *Participants' Demographic Information by Grade Level*

Variable	Category	9th grade (freshman)		10th grade (sophomore)		11th grade (junior)		12th grade (senior)	
		N	%	*N*	%	*N*	%	*N*	%
Gender	Male	11	40.7	5	38.5	43	43.9	27	54.0
	Female	16	59.3	8	61.5	55	56.1	23	46.0
GPA	High honor roll	6	22.2	6	46.2	24	24.5	22	44.0
	Honor roll	8	29.6	3	23.1	34	34.7	13	26.0
	Below honor roll	13	48.1	4	30.8	40	40.8	15	30.0

Table 6. *Participants' Responses to the Questionnaire by Grade Level*

Questions	Category	9th grade (freshman)		10th grade (sophomore)		11th grade (junior)		12th grade (senior)	
		N	%	*N*	%	*N*	%	*N*	%
Q1. About how many hours per day do you spend on the Internet?	<1 hour	0	0.0	0	0.0	2	2.0	0	0.0
	1–2 hours	6	22.2	2	15.4	8	8.2	10	20.0
	3–5 hours	10	37.0	9	69.2	44	44.9	19	38.0

Question	Option								
	6–9 hours	8	29.6	1	7.7	29	29.6	14	28.0
	>9 hours	3	11.1	1	7.7	15	15.3	7	14.0
Q2. Which of the following devices do you use the most each day?	PC	5	18.5	3	23.1	19	19.4	19	38.0
	Tablet	1	3.7	0	0.0	1	1.0	1	2.0
	Smartphone	21	77.8	10	76.9	78	79.6	30	60.0
Q3. About how many hours per day do you spend on these devices?	<1 hour	0	0.0	0	0.0	1	1.0	0	0.0
	1–2 hours	8	29.6	3	23.1	10	10.2	5	10.0
	3–5 hours	9	33.3	6	46.2	45	45.9	24	48.0
	6–9 hours	7	25.9	3	23.1	35	35.7	14	28.0
	>9 hours	3	11.1	1	7.7	7	7.1	7	14.0
Q4. What type of websites/apps do you typically spend most of your time on?	Academic	2	7.4	0	0.0	7	7.1	10	20.0
	Entertainment	5	18.5	6	46.2	34	34.7	13	26.0
	Social media	20	74.1	7	53.8	57	58.2	27	54.0
Q5. Which social media website/app do you spend most of your time on?	Facebook	1	3.7	2	15.4	3	3.1	4	8.0
	Twitter	0	0.0	0	0.0	4	4.1	0	0.0
	Tumblr	2	7.4	1	7.7	3	3.1	0	0.0
	Google +	0	0.0	0	0.0	0	0.0	0	0.0
	YouTube	3	11.1	2	15.4	23	23.5	16	32.0
	Instagram	1	3.7	0	0.0	11	11.2	4	8.0
	WhatsApp	9	33.3	6	46.2	35	35.7	19	38.0
	Snapchat	9	33.3	1	7.7	18	18.4	5	10.0
	Vine	0	0.0	0	0.0	0	0.0	0	0.0
	Other	2	7.4	1	7.7	1	1.0	2	4.0
Q6. About how many hours per day do you spend on that website/app?	<1 hour	7	25.9	1	7.7	12	12.2	5	10.0
	1–2 hours	8	29.6	7	53.8	31	31.6	24	48.0
	3–5 hours	9	33.3	3	23.1	43	43.9	16	32.0
	6–9 hours	1	3.7	2	15.4	6	6.1	3	6.0
	>9 hours	2	7.4	0	0.0	6	6.1	2	4.0
Q7. Generally, how would you describe your Internet/technology/ICT usage?	Infrequent user	0	0.0	0	0.0	1	1.0	0	0.0
	Moderate user	19	70.4	11	84.6	56	57.1	24	48.0
	Excessive user	8	29.6	2	15.4	41	41.8	26	52.0
Q8. Do you find yourself staying online longer than you expected?	Rarely or never	5	18.5	1	7.7	6	6.1	2	4.0
	Every once in a while	5	18.5	2	15.4	19	19.4	4	8.0
	Sometimes	11	40.7	5	38.5	31	31.6	16	32.0
	Often	2	7.4	3	23.1	21	21.4	18	36.0
	Always	4	14.8	2	15.4	21	21.4	10	20.0

Questions	Category	N	%	N	%	N	%	N	%
Q9. Do you find yourself neglecting responsibilities (e.g., chores) to spend more time online?	Rarely or never	9	33.3	1	7.7	19	19.4	5	10.0
	Every once in a while	7	25.9	2	15.4	19	19.4	13	26.0
	Sometimes	8	29.6	4	30.8	35	35.7	18	36.0
	Often	1	3.7	4	30.8	19	19.4	10	20.0
	Always	2	7.4	2	15.4	6	6.1	4	8.0
Q10. Do people in your life complain to you about the amount of time that you spend online?	Rarely or never	6	22.2	2	15.4	28	28.6	14	28.0
	Every once in a while	8	29.6	1	7.7	27	27.6	14	28.0
	Sometimes	2	7.4	4	30.8	21	21.4	15	30.0
	Often	3	11.1	6	46.2	9	9.2	4	8.0
	Always	8	29.6	0	0.0	13	13.3	3	6.0

Table 6. *Participants' Responses to the Questionnaire by Grade Level (Continued)*

Questions	Category	9th grade (freshman)		10th grade (sophomore)		11th grade (junior)		12th grade (senior)	
		N	%	N	%	N	%	N	%
Q11. Does your work suffer because of the amount of time that you spend online (e.g., postponing things or missing deadlines)?	Rarely or never	12	44.4	3	23.1	34	34.7	21	42.0
	Every once in a while	4	14.8	4	30.8	23	23.5	10	20.0
	Sometimes	6	22.2	3	23.1	25	25.5	9	18.0
	Often	3	11.1	3	23.1	9	9.2	7	14.0
	Always	2	7.4	0	0.0	7	7.1	3	6.0
Q12. Does your job performance or productivity suffer because of the Internet?	Rarely or never	17	63.0	2	15.4	33	33.7	19	38.0
	Every once in a while	1	3.7	4	30.8	25	25.5	15	30.0
	Sometimes	6	22.2	3	23.1	20	20.4	9	18.0
	Often	3	11.1	4	30.8	15	15.3	3	6.0
	Always	0	0.0	0	0.0	5	5.1	4	8.0
Q13. Do you find yourself anticipating when you will go online again?	Rarely or never	9	33.3	3	23.1	33	33.7	12	24.0
	Every once in a while	5	18.5	4	30.8	26	26.5	7	14.0
	Sometimes	5	18.5	5	38.5	22	22.4	19	38.0
	Often	5	18.5	1	7.7	14	14.3	8	16.0
	Always	3	11.1	0	0.0	3	3.1	4	8.0

Internet Addiction Disorder: A Case Study of a Private American International School Students in the State of Kuwait

Q14. Do you lose sleep due to late-night Internet use?	Rarely or never	11	40.7	2	15.4	21	21.4	9	18.0
	Every once in a while	3	11.1	3	23.1	18	18.4	9	18.0
	Sometimes	4	14.8	3	23.1	25	25.5	16	32.0
	Often	2	7.4	3	23.1	21	21.4	7	14.0
	Always	7	25.9	2	15.4	13	13.3	9	18.0
Q15. Do you feel preoccupied with the Internet when not online or fantasize about being online?	Rarely or never	8	29.6	5	38.5	52	53.1	23	46.0
	Every once in a while	7	25.9	3	23.1	24	24.5	10	20.0
	Sometimes	6	22.2	4	30.8	18	18.4	14	28.0
	Often	4	14.8	1	7.7	3	3.1	2	4.0
	Always	2	7.4	0	0.0	1	1.0	1	2.0
Q16. Do you try to reduce the amount of time that you spend online and fail?	Rarely or never	10	37.0	3	23.1	42	42.9	16	32.0
	Every once in a while	4	14.8	4	30.8	21	21.4	12	24.0
	Sometimes	4	14.8	2	15.4	22	22.4	12	24.0
	Often	6	22.2	3	23.1	11	11.2	7	14.0
	Always	3	11.1	1	7.7	2	2.0	3	6.0
Q17. Do you attempt to hide how long you have been online?	Rarely or never	16	59.3	6	46.2	60	61.2	29	58.0
	Every once in a while	2	7.4	3	23.1	19	19.4	6	12.0
	Sometimes	3	11.1	3	23.1	10	10.2	13	26.0
	Often	3	11.1	1	7.7	6	6.1	1	2.0
	Always	3	11.1	0	0.0	3	3.1	1	2.0
Q18. Do you choose to spend more time online instead of spending time out with others?	Rarely or never	18	66.7	5	38.5	58	59.2	25	50.0
	Every once in a while	3	11.1	3	23.1	20	20.4	11	22.0
	Sometimes	5	18.5	3	23.1	14	14.3	12	24.0
	Often	0	0.0	2	15.4	6	6.1	0	0.0
	Always	1	3.7	0	0.0	0	0.0	2	4.0
Q19. Do you feel depressed, moody, or nervous when you are not online, and do these feelings go away when you go back online?	Rarely or never	15	55.6	10	76.9	77	78.6	28	56.0
	Every once in a while	4	14.8	2	15.4	10	10.2	9	18.0
	Sometimes	6	22.2	1	7.7	7	7.1	9	18.0
	Often	1	3.7	0	0.0	2	2.0	3	6.0
	Always	1	3.7	0	0.0	2	2.0	1	2.0

(c) GPA

A total of 58 students with a high honor roll GPA (30.9%), 58 students with an honor roll GPA (30.9%), and 72 students with either an above average, average, or below average GPA (i.e., below honor roll) (38.3%) participated in this research study. In terms of GPA, more juniors and seniors fell within the ranges of high honor roll (3.7 to 4.0) and honor roll (3.0 to 3.6). While the previous variables indicated no apparent variation between the Internet usage behaviors of the participants, except in sophomores, 41.7% of participants with GPAs below the honor roll spent six to nine hours on their preferred electronic devices. This finding suggests that those who are academically successful are possibly able to control and limit their Internet usage, typically between a maximum of three to five hours.

However, this statement is dubious due to certain student responses that indicated otherwise. One female senior on the high honor roll mostly uses her smartphone for approximately six to nine hours per day. Despite perceiving herself to be a moderate Internet user, she always finds herself staying online longer than expected, often neglects her responsibilities to spend more time online, always loses sleep due to Internet use, and often feels depressed, moody, or nervous when not online. She described her relationship with the Internet as "an obsession. From my homework to entertainment, I am always using it. Even when I have paper work to do, I am on the Internet listening to music". Additionally, when asked to explain their relationship with the Internet, some respondents stated that their usage was healthy because they balanced the time that they spent on technological devices with the time that they spent away from them. Others explained that they used the Internet to explore and discover new information, to inform themselves on current issues, or to help them complete class

assignments. Many confessed to using the Internet as a means of keeping in touch with relatives and friends in foreign countries and justified their increased usage by the lack of outdoor activities at their disposal. However, while some decided to manage their usage and limit their online sessions, others procrastinated and lost track of time. Table 7 and Table 8 show the results of this analysis.

Table 7. *Participants' Demographic Information by GPA*

Variable	Category	High honor roll		Honor roll		Below honor roll	
		N	%	*N*	%	*N*	%
Gender	Male	16	27.6	26	44.8	44	61.1
	Female	42	72.4	32	55.2	28	38.9
Grade level	9th grade (freshman)	6	10.3	8	13.8	13	18.1
	10th grade (sophomore)	6	10.3	3	5.2	4	5.6
	11th grade (junior)	24	41.4	34	58.6	40	55.6
	12th grade (senior)	22	37.9	13	22.4	15	20.8

Table 8. *Participants' Responses to the Questionnaire by GPA*

Questions	Category	High honor roll		Honor roll		Below honor roll	
		N	%	*N*	%	*N*	%
Q1. About how many hours per day do you spend on the Internet?	<1 hour	1	1.7	1	1.7	0	0.0
	1–2 hours	7	12.1	7	12.1	12	16.7
	3–5 hours	25	43.1	31	53.4	26	36.1
	6–9 hours	15	25.9	13	22.4	24	33.3
	>9 hours	10	17.2	6	10.3	10	13.9
Q2. Which of the	PC	21	36.2	7	12.1	18	25.0

following devices do you use the most each day?	Tablet	2	3.4	1	1.7	0	0.0
	Smartphone	35	60.3	50	86.2	54	75.0
Q3. About how many hours per day do you spend on these devices?	<1 hour	0	0.0	1	1.7	0	0.0
	1–2 hours	9	15.5	8	13.8	9	12.5
	3–5 hours	27	46.6	28	48.3	29	40.3
	6–9 hours	14	24.1	15	25.9	30	41.7
	>9 hours	8	13.8	6	10.3	4	5.6
Q4. What type of websites/apps do you typically spend most of your time on?	Academic	10	17.2	4	6.9	5	6.9
	Entertainment	19	32.8	15	25.9	24	33.3
	Social media	29	50.0	39	67.2	43	59.7
Q5. Which social media website/app do you spend most of your time on?	Facebook	4	6.9	1	1.7	5	6.9
	Twitter	1	1.7	2	3.4	1	1.4
	Tumblr	3	5.2	2	3.4	1	1.4
	Google +	0	0.0	0	0.0	0	0.0
	YouTube	16	27.6	9	15.5	19	26.4
	Instagram	4	6.9	6	10.3	6	8.3
	WhatsApp	21	36.2	23	39.7	25	34.7
	Snapchat	6	10.3	14	24.1	13	18.1
	Vine	0	0.0	0	0.0	0	0.0
	Other	3	5.2	1	1.7	2	2.8
Q6. About how many hours per day do you spend on that website/app?	<1 hour	9	15.5	8	13.8	8	11.1
	1–2 hours	23	39.7	21	36.2	26	36.1
	3–5 hours	20	34.5	23	39.7	28	38.9
	6–9 hours	2	3.4	2	3.4	8	11.1
	>9 hours	4	6.9	4	6.9	2	2.8
Q7. Generally, how would you describe your Internet/technology/ ICT usage?	Infrequent user	0	0.0	0	0.0	1	1.4
	Moderate user	34	58.6	33	56.9	43	59.7
	Excessive user	24	41.4	25	43.1	28	38.9

Table 8. *Participants' Responses to the Questionnaire by GPA (Continued)*

Questions	Category	High honor roll		Honor roll		Below honor roll	
		N	%	*N*	%	*N*	%
Q8. Do you find yourself staying online longer than you expected?	Rarely or never	2	3.4	6	10.3	6	8.3
	Every once in a while	10	17.2	6	10.3	14	19.4
	Sometimes	15	25.9	21	36.2	27	37.5
	Often	17	29.3	14	24.1	13	18.1
	Always	14	24.1	11	19.0	12	16.7
Q9. Do you find yourself neglecting responsibilities (e.g., chores) to spend more time online?	Rarely or never	11	19.0	9	15.5	14	19.4
	Every once in a while	11	19.0	14	24.1	16	22.2
	Sometimes	19	32.8	18	31.0	28	38.9
	Often	10	17.2	16	27.6	8	11.1
	Always	7	12.1	1	1.7	6	8.3
Q10. Do people in your life complain to you about the amount of time that you spend online?	Rarely or never	18	31.0	13	22.4	19	26.4
	Every once in a while	14	24.1	17	29.3	19	26.4
	Sometimes	12	20.7	13	22.4	17	23.6
	Often	8	13.8	6	10.3	8	11.1
	Always	6	10.3	9	15.5	9	12.5
Q11. Does your work suffer because of the amount of time that you spend online (e.g., postponing things or missing deadlines)?	Rarely or never	26	44.8	23	39.7	21	29.2
	Every once in a while	12	20.7	11	19.0	18	25.0
	Sometimes	12	20.7	12	20.7	19	26.4
	Often	6	10.3	9	15.5	7	9.7
	Always	2	3.4	3	5.2	7	9.7
Q12. Does your job performance or productivity suffer because of the Internet?	Rarely or never	21	36.2	24	41.4	26	36.1
	Every once in a while	19	32.8	10	17.2	16	22.2
	Sometimes	7	12.1	11	19.0	20	27.8
	Often	9	15.5	10	17.2	6	8.3
	Always	2	3.4	3	5.2	4	5.6
Q13. Do you find yourself anticipating when you will go online again?	Rarely or never	13	22.4	15	25.9	29	40.3
	Every once in a while	15	25.9	15	25.9	12	16.7
	Sometimes	15	25.9	19	32.8	17	23.6
	Often	12	20.7	8	13.8	8	11.1
	Always	3	5.2	1	1.7	6	8.3
Q14. Do you lose sleep due to late-night Internet use?	Rarely or never	15	25.9	11	19.0	17	23.6
	Every once in a while	8	13.8	12	20.7	13	18.1

		N	%	N	%	N	%
	Sometimes	14	24.1	18	31.0	16	22.2
	Often	11	19.0	9	15.5	13	18.1
	Always	10	17.2	8	13.8	13	18.1
Q15. Do you feel preoccupied with the Internet when not online or fantasize about being online?	Rarely or never	25	43.1	31	53.4	32	44.4
	Every once in a while	19	32.8	11	19.0	14	19.4
	Sometimes	8	13.8	15	25.0	19	26.4
	Often	5	8.6	0	0.0	5	6.9
	Always	1	1.7	1	1.7	2	2.8
Q16. Do you try to reduce the amount of time that you spend online and fail?	Rarely or never	19	32.8	21	36.2	31	43.1
	Every once in a while	19	32.8	11	19.0	11	15.3
	Sometimes	9	15.5	13	22.4	18	25.0
	Often	8	13.8	10	17.2	9	12.5
	Always	3	5.2	3	5.2	3	4.2
Q17. Do you attempt to hide how long you have been online?	Rarely or never	36	62.1	33	56.9	42	58.3
	Every once in a while	7	12.1	6	10.3	17	23.6
	Sometimes	9	15.5	11	19.0	9	12.5
	Often	5	8.6	4	6.9	2	2.8
	Always	1	1.7	4	6.9	2	2.8

Table 8. *Participants' Responses to the Questionnaire by GPA (Continued)*

Questions	Category	High honor roll		Honor roll		Below honor roll	
		N	%	N	%	N	%
Q18. Do you choose to spend more time online instead of spending time out with others?	Rarely or never	30	51.7	36	62.1	40	55.6
	Every once in a while	13	22.4	12	20.7	12	16.7
	Sometimes	11	19.0	10	17.2	13	18.1
	Often	2	3.4	0	0.0	6	8.3
	Always	2	3.4	0	0.0	1	1.4
Q19. Do you feel depressed, moody, or nervous when you are not online, and do these feelings go away when you go back online?	Rarely or never	45	77.6	36	62.1	49	68.1
	Every once in a while	5	8.6	10	17.2	10	13.9
	Sometimes	5	8.6	10	17.2	8	11.1
	Often	3	5.2	0	0.0	3	4.2
	Always	0	0.0	2	3.4	2	2.8

Conclusions and recommendations   المقالة VIII.

The results suggested that adolescents do experience IAD symptoms, as previously found in the research done of Aydin and Sari (2011), Douglas et al. (2008), Freeman (2008), Hawi (2012), Israelashvili et al. (2012), Kim et al. (2006), Li et al. (2014), Odaci (2011), Sariyska et al. (2014), and Young (1996, 2009, 2013, 2017). However, the severity of the symptoms in the student body was low, with only a few symptoms perceived as drastically influential. A connection existed between youth exposure to the Internet and IAD. While variables such as gender were negligible, others such as grade level revealed the impact of students' environment, which potentially justifies a specific type of Internet usage. Although the data classified most participants as moderate users, the diagnostic criteria and individuals' perceptions of their behaviors differed.

To advance the current state of research within the discipline, three vital components should be considered in future research studies. First, diagnostic criteria that apply to high school students should be created. Rather than altering available instruments, which would decrease the validity of the results, developing a criterion that emphasizes the circumstances relevant to the adolescent experience could prevent unintentional misdiagnoses. Moreover, such a criterion could address the evident disparity between past IAD scales and adolescent self-perceptions (Beard & Wolf, 2001). Second, investigative research should examine other demographic aspects to enhance comparisons. Such variables should extend from gender to environmental, technological, emotional, social, psychological, and mental factors, as more than 50% of IAD cases are generated by certain pre-existing pathologies (Dhir, Chen, & Nieminen,

2015; Kim et al., 2006; Saliceti, 2015). Doing so would enable an investigation of the direct relationship between such factors and Internet dependency, thereby enabling the detection of external and internal root causes of IAD symptoms and the foundation of the behavior in question. Third, the scope of the projected research studies should take a cross-cultural longitudinal approach that covers a wide range of students from various ethnics, backgrounds, and academic institutions using different data collection instruments (Douglas et al., 2008; Hsu, Lin, Chang, Tseng, & Chiu, 2015; Laconi, Rodgers, & Chabrol, 2014; Sariyska et al., 2014).

In addition, we need to raise new concerns about the risks of ICT addiction in general and IAD in particular among children and adolescents alike. The State of Kuwait and the rest of the GCC countries could learn from the experiences/practices (e.g., national screening days, prevention programs, and impatient care/programs that give parents and families different treatment options) of other advanced nations (e.g., United States, China, South Korea, Taiwan, Japan, Sweden, United Kingdom, Germany, France, Spain, Italy, and Poland) in addressing factors/problems related to IAD, such as depression, anxiety, suicidal ideation, personality, loneliness, parental behavior, self-control, self-esteem, social self-efficacy, social integration, sleep disturbances, lack of perseverance, obsessive passion, lack of premeditation, and other psychometric properties (Burnay, Billieux, Blairy, & Larøi, 2015; Douglas et al., 2008; Esen, Aktas, & Tuncer, 2013; Koh, 2013; Kuss et al., 2013; Özdemir, Kuzucu, & Ak, 2014; Przepiórka, Błachnio, Miziak, & Czuczwar, 2014; Sariyska et al., 2014; Wąsiński & Tomczyk, 2015; Yang & Tung, 2007; Young, 2013).

The Ministry of Education (MOE) and the Ministry of Higher Education (MOHE) in the State of Kuwait (and the other GCC nations) should focus on IAD by integrating it

into academic curricula and by initiating a national awareness campaign in cooperation with the Ministry of Information (MOI) and the Ministry of Health (MOH). By providing more IAD awareness campaigns and prevention programs to individuals (i.e., children, adolescents, and the elderly), we will be able to educate them about ways of balancing ICT use to avoid becoming consumed by it (Young, 2017).

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