Impact of Internet Pornography Use by Jordanian University students on perceiving its effects on self and others

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Introduction

Hashemite Kingdom of Jordan as it is officially called or Jordan is a small Arab country in the Middle East. It is bordered by several countries. Saudi Arabia is its largest neighbor and is located to the south and east while Iraq is the second neighbor and is located to the north-east. Syria is its border to the north while Israel and Palestine are its neighbors and are located to the west. Amman is the capital and Jordan consisted of three regions, north, central, and south regions. These three regions are divided into 12 governorates. According to a Jordanian daily newspaper Al Arab Alyawm population of Jordan were nearly 7 million (2014, December 29.) Retrieved from http://alarabalyawm.net/?p=412107

Population of Jordan are in regular increase, according to official statistics in 2014 which are consistent with international bank statistics which declared that by the end of 2104 it will exceed 7 million. Other statistics estimate number with nearly 10 million as there are refugees from war in Syria and unrest in Iraq as Al Ghad Jordanian newspaper assured (2014, April 22.) Retrieved from http://www.alghad.com/

Although Internet service was first launched in Jordan in 1995, according to a recent study, Ghazal (2014) pointed out that Jordan was ranked as the second country in Internet usage in the whole of Arab world with a 47 per cent Internet usage rate. The study reported that 95% of Jordanians have cell phones and the availability of relatively cheap smart phones in Jordan has significantly raised the number of Internet users as smart phones enable more people to connect to the Internet. It is also found that 84 per cent of Internet users in Jordan use the service daily.

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There is a continuous growth for Internet use in Jordan as 86.1% of population in Jordan use Internet in 2015 versus 38.1% in 2012 and 2.4 in 2000. These numbers were mentioned in Internet world stats Retrieved from http://www.internetworldstats.com/me/jo.htm and this show the great penetration and Internet spreading in Jordan.

Although Jordan is one of the most progressive and liberal countries in the Arab region in the context of Internet use as there are no restrictions or censorship until now in 2015, recently, there are arguments and discussions to impose restrictions on the Internet from 2013. According to Abdul Aziz, R. (2013) until now Internet in Jordan is not censored. Internet Service Providers in Jordan do not block any content from the users of the Internet, even if that content is pornographic. Jordan is now about to issue a new decision to censor Internet if users choose to have their Internet service censored. People who refuse censorship argue that Jordan should not impose this as a legal requirement as it could have negative consequences and will lead to a slippery slope for accepting online censorship.

This study focuses on perceiving the effects of using internet pornography on university students. It also will examine Jordanian university students usage of Internet generally and Internet Pornographic sites specifically. It will also investigate students' Internet addiction and its relation to use of Internet Pornography. The study will be conducted on a sample of 400 university students in both Yarmouk and Al Al-Bayt University and results will be interpreted in the light of Third person effect Theory.

Although there are many definitions to pornography, in this study we will depend basically on the most used and the most common definition by researchers and the courts. According to Diamond (2009) "Pornography can be defined as any media basically construed as intended to entertain or arouse erotic desire."

The study tries also to investigate the effects of university student demographics on the perception of Internet pornography on self-compared with others. Demographics in this study include; University which students belong to Yarmouk or Al Al-Bayt, nature of faculty theoretical or practical, respondents' sex male or female, mother's

work if she works or not, residence place city or village, parents' educational levels , and socio economic status.

Literature review

Although many studies address Internet use and its effects in Jordan, a few researches have been done on internet Pornography in Jordan and its effects.

El Natoor (2001) examined the relationship between using Internet and both academic achievement and social interaction. She conducted her study on 200 university students in Yarmouk University and Arts and Technology University. Results show no significant relationship between internet use and Academic achievement but a significant relation was found between Internet use and social interaction among students.

Rouwaka (2003) conducted a study on 733 from Yarmouk students to explore how students use Internet technology and he found that male students use Internet more than females. He also found that 14.2% of students use Internet at home while 13.3% use it in university.

El Batran (2003) interviewed 752 university students in the northern region of Jordan from different private universities. He found that 70.1% of students use the Internet and 37.2% of students use Internet for educational purposes while 28.1% use it for chat and making new friends.

Abou Esbaa (2005) conducted a study on the private university of Philadelphia in Jordan. He found that 64% of students think that Internet use affects the time spent with family. He also found that 56.9% of students think that Internet pornographic sites should be watched by the government while 26.7% of students think that chat sites should be watched by the government.

El Namerat (2005) surveyed 500 university students in both Yarmouk University and Technology and Sciences University in Jordan to test the relationship between Internet use and depression among university students. She found that 41.6% suffer from strong levels of depression because of Internet use.

Darweesh (2008) conducted a study on 200 university students in Yarmouk University to determine their Internet uses and gratifications. The study also tried to examine students' perceived Internet effects on self and others. The study found that only 52.5% from Yarmouk university students logged onto the Internet daily and 41% use Internet at home. There was a significant relationship between socio economic status and Internet use at home. Students think 21% from their colleagues visit pornographic sites. Sex was not found to affect internet use but it was found to affect both instrumental and habitual motives students seek to gratify through Internet use. The study found a significant correlation between perceiving negative Internet effects and students' agreement on the necessity of Jordan government to ban pornographic sites.

Darweesh (2011) surveyed 171 students in Yarmouk University to discover university students reading daily newspapers versus visiting their sites on the Internet. The study found that 72.5% read newspaper in their printed form while 78.9% visit newspapers sites on the Internet. This showed how using Internet spread among students in Jordan. Internet use affected buying newspapers as 63.6% stopped buying newspapers as a result of using Internet.

Darweesh& Mahmoud (2014) surveyed 400 Jordanian adolescents aged from 13-18 years and they found that 75.8% of teenagers access internet via smart phones. Adolescents spent 3.5 hours daily on line. Results revealed significant effect for gender on some types of visited websites by male adolescents like social networking sites, chatting, sport, and pornographic websites, while female adolescents visited educational websites more than males. Pornographic sites were found to be on line risks which adolescents are exposed to. It is also found that Parental mediation of adolescents' Internet use has a significant effect on adolescents' exposure to online risks.

Recently in 2015 El Sharairi conducted a study on 200 university students in Yarmouk University and Philadelphia University in Jordan to investigate university students' exposure to pornographic sites on the Internet. He found that 50.5% of students visited these sites on purpose and 99% of students reported visiting pornographic sites either intentionally or by accident. 51.5% of students think that these sites have no effect on them. 98% reported that they knew friends and

colleagues visit these sites on purpose. The study also showed that 96% of university students use Internet five days weekly. 69.5% of students agreed that pornographic sites should be banned.

Internet Uses and Gratifications

A half-hour east of Seattle, not far from the headquarters of Microsoft, Amazon, and other icons of the digital revolution", there is a place called restart. ReStart is one of many rehab centers for Internet addicts (Roberts, 2014).

Most of the clients at ReStart are trying to quit online gaming, an obsession that has cost them their careers, relationships, and health. Hilarie Cash, reSTART cofounder and an expert in online addiction, explains that through Internet addiction, "We end up being controlled by our impulses."

The goal for gaming companies is to keep players playing as long as possible. Game creators do this by creating incentives; the more you play, the more likely you'll upgrade to the next version. Furthermore, sophisticated data feedback systems are used to keep players in "an upgrade treadmill". (Roberts, 2014).

According to Roberts (2014), as online gamers "battle their way through their virtual worlds, the data they generate are captured and used to make subsequent game iterations even more immersive, which means players play more, and generate still more data, which inform even more immersive iterations, and so on."

Roberts (2014) explains that decades of research indicate that our brains are wired to prioritize immediate rewards and costs and to disregard rewards and costs that occur in the future. "This natural bias against the future, so essential for our ancestors, is an Achilles' heel in a modern economy built around immediate pleasure and deferred pain. Now, we're urged to focus only on the present moment, and on maximizing pleasure and minimizing pain in that moment."

Internet Addiction and Pornography

In a study of pornography use, Kraus and Rosenberg (2014) created a pornography-craving questionnaire. The results indicated that the vast majority of the participants watched pornography via the Internet, and

furthermore, craving and compulsive Internet behavior (which would include playing online games, emailing, social networking, and shopping) were moderately correlated. However, the moderate size of the correlation indicates that that compulsive Internet use is and craving for pornography cannot be measured the same way.

Kraus and Rosenberg results indicated that "typical weekly pornography use was associated with craving; specifically, participants who used pornography more often reported higher craving, which we interpret as support for one element of construct validity".

Research has shown that viewing pornographic materials has no negative impact on some, but is problematic for others. One way that pornography viewing has been conceptualized as problematic is through addictive behavior. Internet addiction, in which individuals spend an excessive amount of time engaging in compulsive viewing despite negative consequences and attempts to abstain from the activity (Cooper, Putnam et al., 1999), can be particularly harmful to the compulsive users.

When looking at Internet addiction, the study of Tsitsika at el. (2009) focused on Greek adolescents. The results of their study indicated that a quarter of the respondents, Greek adolescents, access pornographic Internet sites. They also found male gender to be the most significant determinant of all categories of pornographic use.

Tsitskika at el. (2009) determined that the limited prevalence of pornographic Internet site use among females "may be attributed to a reporting bias secondary to pornographic use being deemed socially unacceptable and, or a preference for more socially acceptable erotic romances". They also suggested that since adolescent boys are more likely to use the Internet, the "frequency of Internet use may serve as a potential confounder" for pornographic Internet site use among adolescent girls.

Pornography in America

Viewing pornography on the Internet has become increasingly common in the United States. For example, in Albright's (2008) survey of 15,246 adults in the US, the results indicated that

approximately "75% of men and 41% of women have intentionally viewed pornographic materials online".

According to Diamond (2009), Statistics pointed out that in US in 2008 it was estimated that in one billion dollars would be spent on mobile phone porn alone and some estimations assured that 40 million U.S. Adults regularly visit pornographic internet sites and, of those women that do, 70% of them keep their cyber activities secret.

More recent study of Levin, Lillis, and Hayes (2012), looked at the psychosocial problems associated with frequent viewing of pornography among undergraduate college male students in the United States. Specifically, they focused on whether frequent viewing was related to depression, anxiety, stress, social functioning, and problems related to viewing.

Results indicated that frequency of viewing was significantly related to each psychosocial variable. Results showed that the more frequent the viewing, the greater the problems for the viewer. After controlling for experimental avoidance, viewing was still a predictor for all the psychosocial problems used in the study, except for stress and avoidance.

According to Levin, Lillis, and Hayes (2012), "experiential avoidance was found to moderate the relationship of viewing to viewing problems and anxiety, such that viewing was related to these variables among individuals at clinical levels of experiential avoidance, but not among individuals at non-clinical levels of experiential avoidance." (Levin, Lillis, & Hayes, 2012)

The results of Levin, Lillis, and Hayes (2012) study indicated that experiential avoidance may be a factor in determining if the viewing is considered problematic. "Individuals who view pornography as an escape from life stressors, to numb out, or for other experiential avoidance functions, may encounter a similar harmful pattern. Thus, it may not be the frequency of viewing per se that is harmful, but the particular function of viewing (i.e., why people are engaging in frequent viewing)." (Levin, Lillis, & Hayes, 2012)

Through the expansion of technology access, there have been noted differences between normal and problematic use of the Internet of men versus women.

In the early stages of the Internet, women's Internet use was primarily focused on communication between family and friends. Rainie and Kohot, 2000 found that "61% of women compared to 56% of men said they communicated more often with significant family members. 71% of women compared to 61% of men reported increased communication with friends and 60% of women compared to 55% of men reported that email exchanges had improved their connections with family."

As interment use among women increased, they began to experience financial, occupational, and relational problems resulting from their Internet use. Problematic Internet use has been linked to online sexual behavior; however, men and women engage in different forms of online sexual behavior (Corley & Hook, 2012).

The study of Corley and Hook (2012) focused on women in the United States, specifically looking at differences between non-addict women and women who identified themselves as female sex and love addicts (FSLA), including those who identified themselves as having cybersex problems. "Almost 64% of the FSLA identified themselves as love and relationship addicts whereas 36% identified themselves as sex addicts."

Participants who were addicts showed "trends toward being less likely to be in a committed relationship." Additionally, the female sex and love addicts group experienced "more depression as a result of their sexual behavior, had more withdrawal symptoms, and had attempted suicide more often than did the non-addict group." The findings of Corley and Hook (2012) indicated that depression and withdrawal are risk factors for people with cybersex problems.

Pornography in the Middle East

Hald and Mulya's (2013) study looked at "pornography consumption in Indonesia, a religious, sexually conservative, Muslim-majority nation with strict anti- pornography laws". The sample was made up

of Indonesian University students and tested the relationship between pornography consumption and common non-marital sexual behaviors.

The results indicated, "Pornography is as widely and readily consumed as in comparable international studies predominantly utilizing Western background samples from more sexually liberal and less religious countries with very few laws on pornography". Additionally, patterns of pornography consumptions indicated difference in gender were pronounced and compared to the findings of international counterpart studies, "with men consuming pornography significantly more often, with higher duration, at an earlier age and more often during solitary sexual activity than women".

Third Person Effect

Davison (1983) defines third-person effect as consisting of two interrelated hypotheses: (1) "People tend to perceive mass media as having greater effect on other people than on themselves." And (2) "This discrepancy in perception can have important behavioral consequences".

Previous studies have found self-enhancement to be a prevailing explanation for third-person perception. Self-enhancement is defined as, "the motivation to preserve and enhance a positive self-image, even to the point of fostering unrealistic beliefs and perceptions" (Perloff, 1999, 2002). According to Taylor and Brown (1988), "Cognitive manifestations of self-enhancement are numerous and generally fall into three closely related domains: unrealistically positive evaluations of personal qualities, illusions of control, and unrealistic optimism".

In a study of third-person effect in Internet communication, information exchanges that go beyond receiving information as that in traditional media, Xigen (2008) found that "people believe that when bad things happen in Internet communication, they are more likely to happen to others than to themselves". By expanding the scope of Internet media use, this study indicates additional support to understand the third-person effect in new media technology.

Using third-person perception, Pan, Meng, and Zhou (2012) looked at sexually oriented advertising, gender differences, and sexual

cognition. Results indicated that all three were significant factors of third- person perceptions. Specifically, "After exposure to sexually oriented advertising, females were led to a stronger degree of the third-person perceptions than males. Moreover, the participants with a more negative level of sexual cognition had a stronger degree of the third person perceptions than those with a more positive level of sexual cognition after exposure to sexually oriented advertising."

It is important to note, however, the results did not confirm that exposure to sexually orientated advertising increases third-person perception more than exposure too generic advertising. According to Pan, Meng, and Zhou (2012) "Although sexually oriented advertising has been categorized as a more persuasive component and may consequently affect consumer behavior, it did not yield a greater degree of the third-person perceptions than generic advertising."

Similarly, Zhao &Cai's (2008) study found existence of third-person person in regards to Internet pornography. In particular, they found that women hold stronger third-person perceptions about Internet pornography than men. "Women also hold more positive attitudes, more favorable subjective norms, and stronger intentions when it comes to supporting internet censorship, indicating that important gender differences exist in both the perceptual and behavioral components of the third-person effect in the context of Internet pornography".

When looking at the question, "Is third-person perception motivated by the need to self-enhance?" Zhao &Cai (2008) found that both men and women with stronger predispositions toward self-enhancement are more likely to perceive Internet pornography as having greater effects on others. Previous research has found that the "self versus other perceptual bias tends to increase as the social distance between self and other increases" (Gibbon & Durkin, 1995; Scharrer, 2002).

Method

The population for this study consisted of university students in two Jordanian universities, Yarmouk University in Irbid Governorate and Al Al-Bayt in Mafrak Governorate to represent both urban and rural students. A quota sample of 400 was employed in this study, 200 students from each university.

Students who agreed to complete the questionnaire were interviewed and they were asked to answer a 22-item paper survey instrument and they were encouraged to do so without writing their names or any information about themselves. Data collection process was lasted between February and April 2014. The paper survey contains six sections designed to explore: (1) Total Internet usage among students; (2) motives of Total Internet usage; (3) Internet Pornography usage; (4) students' points of view about the effects of Internet Pornography usage either generally or on themselves compared with others;(5) Internet addiction scale; and (6) their demographics.

Characteristics of the sample

A total of 400 students answered the questions of the survey and half of them are females; the sample consisted of 200 theoretical students in Arts and Mass communication colleges and 200 students in Science and Engineering colleges both from Yarmouk University and Al Al-Bayt University, or 50% and 50% of the sample.

Regarding the educational level of students' parents, their fathers' educational levels varied in their educational status, ranging from less secondary school or equivalent (*N*=148, 37% of the sample) to secondary school graduates and 2years study after secondary school but they are not enrolled in university study (*N*=121, 30.2%). Of the respondents, 23.5%% (*N*=94) reported that their fathers had earned university degrees Bachelor's degree, while 9.3% (*N*=37) reported that their fathers had earned Master's degree or Ph.D. On the other hand, their mothers' educational level varied, ranging from less secondary school or equivalent (*N*=153, 38.2%%) to secondary school graduates and 2 years study after secondary but they are not enrolled in university study (*N*=176, 44%). Of the respondents, 15.3% (*N*=61) reported that their mothers had earned university degrees Bachelor's degree, while 2.5% (*N*=10) reported that their mothers had earned Master's degree or Ph.D. Students also were classified according to their economic status according to their parents' monthly income, travelling abroad and purpose of travelling, whether they live in a house they own or renting it, whether their mothers work or not, number of family members, and family possessions. They were then classified according to their socio economic status into low class

(*N*=125, 31.2%), middle class (*N*=202, 50.5%), and high class (*N*=73, 18.3%).

Results

Internet use and visited sites:

Students were asked first 'How many hours do you use the Internet weekly?'' On a 3-point scale: 1 (one day or two), 2 (three or four days), 3 (five days or more) then they were asked 'How many hours do you use the Internet daily?' On a 4-point scale: 1 (less than one hour), 2 (one to two hours), 3 (two to three hours), 4 (more than three hours per day). By adding these two questions, Students were classified according to their Internet use to high, middle, and low in Internet use.

Most of Respondents reported using the internet five days or more weekly (*N*=248, 62%) while less than fifth of the sample reported using it one day or two weekly (*N*=78, 19.5%). 18.5% of students (*N*=74) use the internet three or four days weekly. Students spend an average of 2.59 hours per day using the Internet and 34% of them use it more than three hours each day (*N*=136) while 25.8% use it less than an hour daily (*N*=103). Less than quarter of the respondents 23.5% use the Internet from one hour to two hours daily, while 11.5% only of them use it from two hours to three hours each day (*N*= 46).

Most of students were found to access the Internet via their Smartphone most of the time (*N*=283, 70.8%), this was followed by laptop (*N*=137, 34.4%) and desktop computer (*N*=46, 11.5%).

Respondents were asked to list their visited sites while they online. Responses ranged from 1 (Never) to 4 (Always). Frequency results showed that most visited sites were social network sites (*M*=3.52). These sites were followed by sites of downloading music, music videos, and movies (*M*=3.01); scientific and educational sites (*M*=2.76), News sites (*M*=2.69), email sites (*M*=2.58), games sites (*M*=2.34), sports sites (*M*=2.41), chatting sites (*M*=2.16), and Pornographic sites (*M*=1.79). As for students' visiting pornographic sites, we should take this result with a great caution as students would not admit visiting these sites, so we made projection questions like asking students to express their agreeing to this statement. Responses

ranged from 1 (Never agree) to 4 (Always agree). We found (*M*=3.26). Many other projection questions will follow in the section of Internet Pornography usage among students.

Motives of Internet use:

To measure students' motives of Internet use, the researchers used the literature of uses and Gratifications theory which divide motives into instrumental and habitual. Three statements reflect both instrumental and habitual motives were listed and students were asked to mention whether these are reasons for using the Internet. Students' answers were ranging from (1) Never to (4) Always. Instrumental statements include: I use the Internet to know what is happening around me, to learn and know about life, and for study and research purposes. Habitual statements include: I use the Internet to talk to or to date friends of different sex, for entertainment and passing time, and to log onto Pornographic sites.

As for motives of student' usage of the Internet, we found that students use it for instrumental motives (*M*=9.44) more than habitual (*M*=6.77). For more details concerning instrumental use, Students use the Internet to learn and know about life (*M*=3.24), to know what i happening around them (*M*=3.17), and for study and research purposes (*M*=3.03). Students use the Internet also for habitual use. They use it for entertainment and passing time (*M*=2.85), to date friends of different sex (*M*=2.19), and to log onto pornographic sites (*M*=1.72).

Internet Pornography usage:

To measure students' Internet Pornographic sites they visit, they were asked first 'how often do you visit Pornographic sites?'' On a 6-point scale: 1 (Never), 2 (once a month or less), 3 (once a week or less), 4 (From twice to three times a week), 5 (daily), 6 (many times a day). Frequency results revealed that most of students (M=3.88) reported that they visited pornographic sites (*N*=232, 58%), while (*N*=168, 42%) said then never visited these sites. From those who reported visiting Pornographic sites nearly fifth admitted visiting these sites once a month or less (*N*=73, 18.2%). 14.7% of students said they visited these sites (*N*=59) while 13.3% said this (*N*=53). 10.5% of

students admitted visiting these sites (*N*=42) while 1.3% admitted this (*N*=5).

To know in what age respondents visited Pornographic sites, they were asked 'In what age do you visit Pornographic sites?' On a 3-point scale: 1 (From 11-13 years old), 2 (From 14-16 years old), 3 (From 17-19 years old). We found that more than third of the students (*N*=139, 34.7%) visited these sites while they were from 17-19 years old, while 15.3% of students (*N*=61) visited these sites while they were from 14-16 years old. Only 8% of the students (*N*=32) who visited pornographic sites while their ages were between 11- 13 years old.

Students' opinions and beliefs about Internet Pornography:

Respondents were asked to express their agreement or refusal to some statements reflect opinions and beliefs about internet Pornography and their answers were ranging from (1) Never agree to (4) Always agree. Students agree that parents should prevent their sons and daughters from exposure to Internet Pornographic sites (*M*=3.69), Clerics and religion leaders should fight these sites (*M*=3.49), Government should block these sites for their dangerous effects on people (*M*=3.37), there are so many university students visit these sites (*M*=3.29), visiting these sites has a lot to do with family disintegration (*M*=3.25), visiting these sites is responsible for increased violence towards women (*M*=2.97), and I try to prevent my friends from visiting these sites (*M*=2.86).

Respondents also were asked if they believe university students may accept some behaviors among unmarried people. Frequency tables showed that more than third of the sample (*N*=143, 35.8%) believe that university students may accept hands holding between unmarried hands holding while 35.3% (*N*=141) believe students may accept making romantic relationships. 22.8% believe that university students may accept body touches in romantic relationships (*N*=91). More than quarter of the sample (*N*=102, 25.5%) believe university students may accept making sexual relationships among unmarried people.

Perceiving Internet Pornography effects on self and others:

Subjects responded to two questions, With a Likert type scale ranging from (1) very weak to (5) very strong to measure Perceiving Internet Pornography effects on self and other. Results showed that students

overestimate these effects on others (*M*= 4.13) while they underestimate these effects on self (*M*= 2.44).

Internet addiction:

Students' addiction to Internet was measured by 20 items that included statements reflect addictive behaviors while using the Internet. Subjects responded to these statements with a Likert type scale ranging from (1) Never to (4) Always. The items were then factored by principal components analysis with varimax rotation.The factor solution yielded four factors (physiological and psychological Internet preference and its effect on university study, loss of time control and adoring internet, involvement in Internet use and withdrawing from real life, and treatment trials and failing) with greater than eight eigenvalue and explained (62.7 percent) of the total variance (see Table 1) Chronbach's alpha for Internet addiction is(0.903).

Factor 1 (physiological and psychological Internet preference and its effect on university study) explained 38.9% of the total variance with an eigenvalue of 7.7. The factor is loaded with 'I prefer to spend more time with the Internet to going out with others', 'I feel depressed, nervous and bad tempered when I am not allowed to be the Internet, 'My performance in university is affected because of the Internet use', 'I am thinking about Internet when I am not using it', 'My grades decrease in university because of Internet use', 'I prefer the enjoyment with internet more than enjoyment with real people', and' I neglect house work to stay more time with Internet'.

Factor 2 (loss of time control and adoring internet) explained 8.2 per cent of the total variance with 1.6 eigenvalue. The factor is loaded with,' I miss some hours of sleeping as I stay awake on the Internet until late at night', 'I say to myself I will spend just minutes on the Internet but I can't leave it', 'I feel sleepy and yawn when I am on the Internet', 'life is empty, boring, and happiness free without the Internet', and 'I spend time with the Internet more than I intended'.

Factor 3 (involvement in Internet use and withdrawing from real life) explained 7.6% of the total variance with an eigenvalue of 1.8 The factor is loaded with' I check my email account before doing anything else', 'I keep my privacy as a secret when I was asked about what I am doing on the Internet', 'I find myself taking part in Internet

activities again when I return to it after leaving'. 'I feel anxious in my life because of the Internet use', 'people who are around me complain because of long time I spent with the Internet', and 'I make new relationships through the Internet'.

Factor 4 (treatment trials and failing) explained 6.8 per cent of the total variance with 1.83 eigenvalue. The factor is loaded with 'I try to reduce hours spent on the Internet but I fail' and' I try to hide amount of time I spend on the Internet'.

Table 1 Factor Analysis of Internet addiction

Addiction statements	Factor 1	Factor2	Factor3	Factor4
I prefer to spend more time with the Internet to going out with others	.758			
I feel depressed, nervous and bad tempered when I am not allowed to be the Internet	.731			
My performance in university is affected because of the Internet use	.704			
I am thinking about Internet when I am not using it	.673			
My grades decrease in university because of Internet use	.626			
I prefer the enjoyment with internet more than enjoyment with real people	.536			
I neglect house work to stay more time with Internet	.494			
I miss some hours of sleeping as I stay awake on the Internet until late at night		.794		
I say to myself I will spend just minutes on the Internet but I can't leave it		.665		
I feel sleepy and yawn when I am on the Internet		.661		
life is empty, boring, and happiness free without the Internet		.601		
I spend time with the Internet more than I intended'		.443		
I check my email account before doing anything else			.709	
I keep my privacy as a secret when I was asked about what I am doing on the Internet'			.651	
I find myself taking part in Internet activities again when I return to it after leaving			.573	
I feel anxious in my life because of the Internet use'			.548	
people who are around me complain because of long time I spent with the Internet			.445	
I make new relationships through the Internet'			.402	
I try to reduce hours spent on Internet but I fail				.892
I try to hide amount of time I spend on the Internet				.772

Predictors of Internet addiction

Pearson Correlations and multiple regression analyses were calculated by Enter technique to test if some variables significantly predicted participants' Internet addiction. The results of the regression indicated that three predictors affected students' Internet addiction; Internet habitual use, the university which student is enrolled in, and using Internet pornographic sites. Table2 summarizes the descriptive statistics and analysis results. As can be seen both habitual Internet use and Internet pornography use are positively and significantly correlated with Internet addiction, indicating that those with higher use of Internet habitually and higher in Internet Pornography use tend to have higher degrees on Internet addiction scale. It can be also seen that University which students enroll in is positively correlated with Internet addiction (coded as 1=Yarmouk University and 2=Al Al-Bayt), indicating that Yarmouk University students have scored more degrees on Internet addiction scale than Al Al-Bayt university students. The multiple regression model with all three predictors produced $R^2 = .304$, $F(16, 383) = 10.46$, $p < .000$.

Table 2 Summary statistics, correlations and results from the regression analysis to determine Predictors of Internet addiction.

Variable	Mean	Std	correlation with Internet addiction	multiple regression weights	
				P	β
Internet addiction	51.24	12.8	1		
Internet habitual use	6.77	2.2	.47 ***	.000	.356
University enrolled in	1.5	.5	.276 ***	.001	-.165
Using Internet Pornography	3.88	2.01	.365 ***	.000	-.211

* p< .05 ** p < .01 ***p

Predictors of Internet Pornography use

Pearson Correlations and multiple regression analyses were calculated by Enter technique to test if some variables significantly predicted participants' Internet addiction. The results of the regression indicated that four predictors affected students' Internet addiction; status of Mother Work, sex of the student, Logging into Internet pornographic sites, and Internet addiction. Table3 summarizes the descriptive statistics and analysis results. As can be seensex of the student is

positively and significantly correlated with Internet Pornography use, indicating that males tend to be more Internet Pornography users than females, On the other hand It can be seen that Mother status of work is negatively and significantly correlated with Internet Pornography use, indicating that those whose mothers are housewives are less Internet Pornography users than whose mothers work. It can be also seen that logging onto Pornographic sites and Internet addiction are Positively correlated with Internet Pornography use, indicating that University students who logged more onto the Pornographic sites and who scored higher on Internet addiction score tend to use Internet Pornography more than their counterparts who visited pornographic sites less and who scored less on Internet addiction scale.. The multiple regression model with all four predictors produced $R^2 = .354$, $F(16, 383) = 13.126$, $p < .000$.

Table 3 Summary statistics, correlations and results from the regression analysis to determine Predictors of Internet addiction.

Variable	Mean	Std	correlation with Internet Pornography use	multiple regression weights	
				P	β
Internet Pornography use	3.88	2.01	1		
Mother status of work	1.13	33.7	-.098 *	.05	-.092
Sex	1.5	.5	.382 ***	.000	.197
Logging onto Pornographic sites	1.8	1.04	.482***	.000	.312
Internet addiction	51.24	12.8	.365 ***	.000	.196

* p< .05 ** p < .01 ***p

Research Hypotheses

H1: Demographic variables have a significant effect on Internet usage among university students.

H2: Demographic variables have a significant effect on Internet Pornography use among university students.

H3: Demographic variables have a significant effect on Internet addiction among university students.

H4: There is a significant relationship between internet addiction and both habitual internet use motives and Internet Pornography use.

H5: Students tend to perceive stronger effects for Internet Pornography use on others more than on themselves.

H6: Those who perceive stronger effects for Internet Pornography use on others more on themselves tend to impose more control on Internet Pornography use.

Testing Study hypotheses

H1: Demographic variables have a significant effect on Internet usage among university students.

To test the effect of demographic variables of respondents on Internet use, five separate t-tests (university students belong to Yarmouk or Al Al-Bayt, nature of faculty theoretical or practical, respondents' sex male or female, mother's work if she works or not and residence place city or village) and three separate one way ANOVA tests were carried out for the other demographic characteristics (educational levels of both respondents' parents and socio economic status).

Results indicated that neither nature of faculty nor residence place had a significant effect on Internet use. The same is true for mothers' work case concerning Internet usage. Internet use was significantly affected by the university students belong to (t=2.2, df=398, p=0.03), Yarmouk university students use Internet (M=5.20) more than their counterparts in Al Al-Bayt university (M=4.83). Internet use was also significantly affected by the sex of university students (t=2.7, df=398, p=0.008), male university students use Internet (M=5.24) more than their female counterparts (M=4.79).

Neither the educational level of the fathers (F=2.3, p=0.07) nor mothers (F =.618, p=0.613) had a significant effect on students' Internet use, but one-way ANOVA revealed that SES had a significant effect on Internet use (F =4.4, p=0.01).It is clear that students in the high SES use Internet (M= 5.49) more than who are in the middle SES (M= 5),and they both in these two levels use Internet more than students who are in the low SES (M= 4.7).

H2: Demographic variables have a significant effect on Internet Pornography use among university students.

To test the effect of demographic variables of respondents on Interne Pornography use, we did the same as in H1, five separate t-tests and three separate one way ANOVA tests were carried out for the other

demographic characteristics (educational levels of both respondents' parents and socio economic status).

Results indicated that nature of faculty had no significant effect on Internet Pornography use but all other demographics had a significant effect on Internet Pornography use. Mothers' work case was found to have a significant effect on Internet Pornography use ($t=1.9$, df=398, $p=0.04$), students whose mothers work use Internet Pornography ($M=3.3$) less than those students whose mothers had no work ($M=3.9$). Internet Pornography use was significantly affected by the university students belong to ($t=-2.5$, df=398, $p=0.01$), Yarmouk university students use Internet Pornography ($M=3.6$) less than their counterparts in Al Al-Bayt university ($M=4.1$). Internet Pornography use was also significantly affected by the sex of university students ($t=-8.2$, df=398, $p=0.000$), male university students use Internet ($M=3.1$) less than their female counterparts ($M=4.6$).It was also found that residence of student had an effect on Internet Pornography use ($t=-2.07$, df=398, $p=0.03$), students who live in city use Internet Pornography ($M=4.03$) more than their counterparts in village ($M=3.95$).

Neither the educational level of the fathers (F=1.08, $p=0.36$) nor mothers (F =1.2, $p=0.29$) had a significant effect on students' Internet Pornography use, but one-way ANOVA revealed that SES had a significant effect on Internet use (F =4.5, $p=0.01$).It is clear that students in the high SES use Internet as their counterparts in the low SES(M= 13.70) for each and less than who are in the middle SES (M= 13.35). Post hoc analysis using the LSD technique indicated that the significant difference can be attributed exclusively to the category of the 'middle SES', since the 'middle SES was the highest compared to high and low SES students, with the significant p-value of 0.05.

H3: Demographic variables have a significant effect on Internet addiction among university students.

To test the effect of demographic variables of respondents on Interne addiction, we did the same as in H1 and H2. Five separate *t*-tests and three separate one way ANOVA tests were carried out for the other demographic characteristics (educational levels of both respondents' parents and socio economic status).

Results indicated that nature of faculty had no significant effect on Internet addiction but all other demographics had a significant effect on Internet addiction. Mothers' work case was found to have a significant effect on Internet addiction (t=-1.97, df=398, p=0.048), students whose mothers work use Internet Pornography (M=54.5) more than those students whose mothers had no work (M=50.76). Internet addiction was significantly affected by the university students belong to (t=5.5, df=398, p=0.000), Yarmouk university students are Internet addicts (M=54.76) more than their counterparts in Al Al-Bayt university (M=47.82). Internet addiction was also significantly affected by the sex of university students (t=4.91 df=398, p=0.000), male university students are Internet addicts (M=53.9) more than their female counterparts (M=48.6). It was also found that residence of student had an effect on Internet addiction (t=-2.2, df=398, p=0.027), students who live in city are Internet addicts (M=50.22) less than their counterparts in village (M=53.22).

Educational level of the fathers (F=1.2, p=0.30) had not a significant effect on students' Internet addiction, but educational level of mothers had a significant effect on students' Internet addiction (F =2, 9, p=0.03). Post hoc analysis using the LSD technique indicated that the significant difference can be attributed exclusively to the category of the 'post graduate studies.' since the adolescents' mothers who have 'post graduate studies' category was the highest compared to all other categories, with the significant p-value at 0.05. It is followed by the 'university degree holders', 'Secondary or middle school' and the 'Respondents' mothers who have less than secondary school certificate'.

One-way ANOVA revealed that SES had a significant effect on Internet use (F =6.04, p=0.003).It is clear that students in the high SES are Internet addicts (M=55.8) more than their counterparts in the middle SES (M=50.7) and they both in these two levels are Internet addicts more than who are in the low SES (M= 49.5). Post hoc analysis using the LSD technique indicated that the significant difference can be attributed exclusively to the category of the 'high SES', since the 'high SES' was the highest compared to middle and low SES students, with the significant p-value of 0.05.

H4: There is a significant relationship between internet addiction and both habitual internet use motives and Internet Pornography use.

This hypothesis has been proved since Pearson's correlation revealed strong relationships between both internet habitual motives and Internet addiction, (r=0.47, p=0.000). There is also significant correlation between Internet addiction and Internet Pornography use (r=0.37, p=0.000).

H5: Students tend to perceive stronger effects for Internet Pornography use on others more than on themselves.

This hypothesis was totally supported by using Paired sample t-tests as they revealed that students differ in perceiving effects of Internet Pornography use on others compared with on themselves (t=23.9, df=399, p=0.000) as students tend to perceive stronger effects on others (M=4.13) compared with these effects on themselves personally (M=2.44). The relationship between the two statements reflecting perceived effect on others and self is significant (r=.322, p=0.000).

H6: Those who perceive stronger effects for Internet Pornography use on others more on themselves tend to impose more control on Internet Pornography use.

We computed the degrees each student has on a scale to measure students' vision or opinions in imposing more control on Internet Pornography use. Respondents were asked to express their agreement or refusal to some statements reflect opinions and beliefs about internet blocking and their answers were ranging from (1) Never agree to (4) Always agree. These statements are Government should block these sites for their dangerous effects on people, parents should prevent their sons and daughters from exposure to Internet Pornographic sites, I try to prevent my friends from visiting these sites, and Clerics and religion leaders should fight these sites.

We found a strong relationship between perceiving stronger effects on others as a result of Internet Pornography use and tending to impose control on Internet Pornography use (r=.135, p=0.003). So, this hypothesis was totally supported and this means the behavioral component of Third Person Theory was supported in this study as the

perceptional component of the theory was supported in the previous hypothesis.

Discussion

This survey provides important insight into the usage of the Internet in general, and pornographic sites in particular, by Jordanian college students. Students were found to use the Internet regularly for many reasons – both instrumental and habitual. Use of the Internet to view pornography was relatively high – perhaps higher than might be expected in a conservative Muslim society.

As for Predictors of Internet addiction and pornography use, It was found that three Internet habitual use levels, the specific university that one attends, and using pornographic sites were all valid predictors of Internet addiction. Four predictors were found regarding pornography use on the Internet: whether or not their mother worked, student gender, logging into pornographic sites, and Internet addiction. It seems clear that several key factors come into play with both Internet addiction and pornography use – and that they may be interrelated.

Regarding uses of and gratifications from the Internet, it seems consistent with prior research that Internet addiction is a challenge for people of all stripes – both genders and people from different backgrounds.

Specifically in relation to pornography addiction, results of Kraus and Rosenberg (2014) seem to be supported in that people seem to become addicted to pornography, especially men (as noted by Tsitsika et al., 2009). Of course, as Tsitsika et al. state, it cannot be determined if lesser use of pornographic sites by women is a real effect or the result of reporting bias.

Although the current study does not address pornography in the West, it certainly bears some witness to pornography use in the more conservative Middle East. As in the West, and also in previous studies of the Middle East, despite cultural expectations, use of pornography seems to be quite prevalent. Again, as noted by Hald

and Mulya (2013), men tend to consume significantly more pornography then women.

Interestingly, Third Person Effect seems to be supported in the current study, with people that admit to consuming Internet pornography believing that it has negative effects on others, but not on them. This supports the work of Perloff (1999 and 2002), Taylor and Brown (1988) etc. As noted in previous research (such as Meng& Zhou, 2012), the type of content consumed (e.g. the level of pornographic content) does not itself seem to affect the Third Person effect.

Analysis showed that a student's university was a key factor in their Internet use. Other demographic variables were found to be unrelated. Conversely, most demographic variables did correlate with consumption of pornography. Interestingly, student's whose mothers worked used the Internet for pornography consumption less than those whose mothers did not work – not more as might be expected with an empty house. University attended did correlate with pornography use. Not surprisingly, based on prior research, it was found that men admitted to consuming more pornography than did women. City dwellers also admitted to be greater pornography consumers than those students from rural areas. Internet addiction was found to be correlated with a number of factors including whether or not mothers worked and also socio economic status of the family.

Internet addiction, habitual motives for use, and Internet pornography use were all found to be correlated. Indeed, additionally, it was found that students tended to feel that these issues affected others more so than themselves. People that believed that Internet had a strong negative effect on others were more likely to be in favor of Internet usage restrictions.

Clearly, several key factors can be found to relate to both Internet addiction and pornography use among Jordanian college students. Further, Internet addiction and pornography use seem to be correlated. Some key issues include perceived gratifications – especially habitual ones – obtained from use of pornography as well as the strength of the third person effect – where students believe that Internet addiction and the negative effects of pornography consumption affect others more than it affects them.

Although further research should be performed to compare uses and gratifications among different cultures and age groups, this study provides helpful information into understanding how Internet addiction and pornography consumption may be affecting students in Jordan.

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