

Social Media Addiction in Geopolitically At-Risk Youth

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Abstract The concept of an addictive process related to social media use, specifically for youth, has been explored in several venues including the attempt to identify factors of vulnerability in predicting excessive or maladaptive use of social media. While the focus has been on personal characteristics, there are also clear environmental stressors or situational variables that affect particular populations that might contribute to patterns of addictive social media use, such as limited social and recreational outlets, restricted movement, and access to in-person socialization with peers, as well as stress related to local geographic political conflict. The current study examines the concept of geopolitical vulnerability related to living in a militarized occupied area and patterns of maladaptive addicted social media use in young adults. The sample included 744 students at An-Najah National University of Palestine all residing in the occupied West Bank of Palestine. The results indicate that the level of maladaptive use of social media is high with a vast majority of students scoring within the range of an addictive pattern of use (47%). These findings are qualified by the variables of gender, with males at highest risk, and level of study with bachelor level students exhibiting significantly more addictive behaviors than master's level students in regard to social media. In a geopolitical area with high stress and few opportunities for leisure activities or open socialization, it is not difficult to imagine a heightened vulnerability to an addictive pattern of social media use given its continual availability, relative easy access, and contrived feeling of social satisfaction for youth. However, this virtual "fix" may come at a high price for developing adults who lack social skills for their challenging environments, are unable to discern reality from the fantasy of social media, and are creating habits that will be formative in their adulthood. Further investigation is needed to examine the specific risks of excessive social media use and structural societal changes needed to add protective factors to combat social media addiction in the upcoming generations in high stress areas.

Keywords Social media addiction · Palestine · Geographical risk

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Addiction, according to the American Society of Addiction Medicine, is a primary, chronic disease of brain reward, motivation, memory, and related neural circuitry. Addiction is characterized by the inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of the significance of problem behaviors and interpersonal relationships, and deregulated emotional states. Like other chronic disorders, without treatment, addiction leads to behavioral patterns of maladaptive use, attempts to abstain, relapse, and remission. Addiction, however, is not determined by the mere frequency of use but the qualitative changes to the individual related to use including the way the individual reacts to abstaining from use, thoughts and cravings regarding use, and use to avoid negative situations, thoughts, cognitions, and feeling states (American Society of Addiction Medicine 2016).

Addiction is known to affect neurotransmission such that motivational hierarchies are altered and supplant healthy self-care-related behaviors, which includes effects on impulse control, diminished judgment, and increases the pursuit of the desired behavior despite cumulative adverse consequences (American Society of Addiction Medicine 2016). While genetic factors account for some of the incidence of addictive behaviors, presupposing a genetic pre-disposition for most addictive behaviors, environmental factors may enhance or maintain the addictive patterns of use and disinhibit or minimize their negative consequences through actual cultural or community support and acceptance of the addictive behavior as well as the absence for alternative behaviors.

Addictive behaviors are often escapist in nature and allow the individual to avoid or manage an environmental stressor by non-productive non-confrontation and distraction. The individual, especially youth who have not yet fully developed the skills to manage situational stressors, are likely to experience significant deficits later in life while using addictive behaviors to address environmental challenges or having no well-trained alternative problem-solving response. Youth with addictive behavior patterns frequently do not develop healthy, positive, and action-based coping skills, when faced with external stressors. People with addictive habits generally have reduced local social support systems (despite having extensive addiction-related contacts). Individuals with addictive patterns of use have restricted schedules for alternative activities, spending most of their free time in the behaviors related to the addictive process (Hardie and Tee 2007).

Behavioral indicators of addiction include lost time, the diminishing of alternative activities, continual use in the face of negative consequences, narrowing of the behavioral repertoire, and the recognition of the overuse while minimal behavioral reactivity. In the area of cognition, addiction affects amount of time thinking about use, overestimation of the positive consequences of use, and underestimation of the negative consequences of use, as well as the minimization of the frequency and results of use. Emotional addiction causes heightened sensitivity to the perception of stress, increases anxiety, and results in the difficulty in recognizing and managing negative feeling states (American Society of Addiction Medicine 2016).

Treatment for addiction is challenging with historic high levels of recidivism. The best treatment models includes reducing the frequency and intensity of use, increasing periods of abstinence, and increasing functionality when not using while managing negative responses to abstinence (American Society of Addiction Medicine 2016).

There has been much debate about the idea that social media use should be considered as an addictive behavior and, more specifically, what about social media is in fact the variable of addiction. One theory is that it is in fact the opportunity for self-disclosure that is in fact the most potent factor in the use of social media (Tamir and Mitchell 2012). Studies have shown

that 30–40% of human speech is used in normal social situations to relay information about one's self to others (Dunbar et al. 1997). In contrast, it has been found that social media posts are approximately 80% self-focused (involving talking about one's own thoughts, feeling, and or activities) (Naaman et al. 2010). The question then becomes is self-disclosure an intrinsically rewarding activity that is unique to humans as other species seem not to have self-disclosure as a basic tendency?

In a set of three studies, Tamir and Mitchell (2012) investigated the neurological responses to various conditions related to self-disclosure in order to identify if there is a measurable activation of the pleasure sites in the brain (those activated during primary reward opportunities such as eating and sex) related to thinking or sharing about one's thoughts or opinions (self-reflection and self-disclosure). The studies demonstrated that neural activation was significantly increased when individuals were asked to talk or respond to questions about their own thoughts and opinions (as opposed to talking about another person's thoughts or feelings). In addition, there was a separate and equally significant response when an individual knew that someone else was listening or reading their thoughts relating to themselves or others (to say there was more activation when the responses were known to have an audience). The subjects chose to talk about themselves even in the face of diminishing momentary rewards (they were paid a minimal fee for making statements about others and not themselves). These findings indicate that there seems to be a primal biological reward for self-disclosure causing a chemical reaction that could form the base of an addiction.

Beyond a primary internal reward there are external reinforcers for social media use as well. It has been suggested that having a space to express and create personal content gives those who perceive themselves as marginalized, such as youth, a voice and social affirmation that they rarely experience in their daily lives (Rutledge 2016). It is further suggested that there are rewards in expanding social networks, increased access to critical information, and even the possibility of economic gain through social media usage (Moeller 2010). Correa et al. (2010) reports that 75% of people in the age range of 18–29 use the internet on a regular basis. A further study (Duggan and Brenner 2013) identified that 67% of internet users are consumers of social media. Dill (2013) reported that Facebook alone had 800 million users producing over 700 billion messages monthly indicating that access is high within the target age group internationally.

Social media is highly accessible and has few obvious risks making it an easy source of addictive behavior patterns as individuals do not monitor use expecting negative outcomes (Thompson and Lougheed 2012). Despite excessive use, however, there is little professional guidance available as to how to use social media in a positive and non-addictive fashion, especially for youth. The American Pediatric Association's Media Guidelines initially advised to use restriction based on hours of screen time a child was exposed to (recommending less than 1 hour daily); however, more recently, the APA committee on technology, acknowledging the use of technology in education, has changed its standards to include issues of life balance and the purpose and interactivity of the technology-based activity (AAP 2011).

It is clear that an answer lies in a lifestyle and balance strategy that promotes physical activity, real-time socialization, sleep, and educational engagement and leads to maturity and self-discipline in the area of social media usage. It has even been suggested that total abstinence from social media disallows the youth to build skills of self-regulation and leads to higher vulnerability when they are eventually exposed to technology unsupervised (Rutledge 2016). However, with little knowledge about the parameters and long-term effects

of excessive social media use, it is difficult to create professionally sound and clear standards and recommendations for social media use.

Some investigation has been done in identifying personal characteristics of individuals that predict addictive use patterns. It has been found that those with low self-esteem, socially isolated, and with poor impulse control are more likely to demonstrate addictive patterns of use (Duggan and Brenner 2013). As studies however are correlational, it is difficult to state causality. The area of external factors in turn has been severely neglected and much less is known about environmental factors leading to the risk for addictive social media use in any circumstances (Bennet 2013).

The situation of youth in the occupied territories of Palestine is fraught with environmental stressors (militarization, poverty, lack of employment opportunities, cultural pressures, etc.) and few positive social outlets due to the restrictions on movement between communities, a lack of recreational facilities, and cultural standards of gender separation. In this situation, it is likely that a vulnerability to the easily accessible and unrestricted social networks of social media could lead easily to excessive and maladaptive use in the face of heightened stressors and few alternative avenues for socialization. The following study examines this premise by investigating the addictive patterns of social media use in Palestinian university students and identifying protective factors of gender, age, and level of education.

Specifically, this study was designed to answer the following questions:

1. What is the level of social media usage among An-Najah National University students (students under a perceived high level of stress and social isolation)?
2. Are there differences in social media usage among An-Najah National University students due to study variables: gender and academic level?

Methodology

The present study was conducted at An-Najah National University (ANNU), which has the highest student population of any other facility of higher education, with wide economic, geographic, and social variability, representative of the Palestinian population.

Participants were selected using a simple random sampling technique of using class lists of compulsory university wide courses. Every 4th student was solicited for study purposes. Participation was voluntary. The population was selected from those who accepted to answer the questionnaire. The sample was approximately 5% of current ANNU students; 850 questionnaires were distributed and 744 completed and analyzed. Table 1 shows the sample of the study according to demographic variables.

Table 1 Sample distribution according to study variables

Variable		Gender		Total
		Male	Female	
Academic level	B.A.	359	341	700
	M.A.	15	29	44
Total		374	370	744

The Internet Addiction Test (IAT) created by Young (2012), was used to measure the variable of level of addictive behaviors. The Internet Addiction Test (IAT) is a reliable and valid measure of addictive use of internet, developed by Kimberly Young. It consists of (19) items that measure mild, moderate, and severe levels of internet addiction. After translating the questionnaire to Arabic, a committee of experts in psychology reviewed the items of the scale for content validity and comprehensiveness. The researchers used a score of 80% agreement between experts for inclusion of each item. Accordingly, the researchers dropped (1) item of the scale and changed the interpretation for others; minor modifications were made on the basis of feedback from the committee members. In order to test reliability of the scale, Cronbach's alpha formula used among a sample of (50) university students independent of the sample of the study (reliability sample) to assess internal consistency for the Internet Addiction Test, Cronbach's alpha coefficients indicated high internal consistency for the total scale (0.87).

The scale includes information on demographics, internet usage, and perceived negative effect of internet use on personal performance. The scale measures internet use according to the following criteria:

1. No to mild addictive symptoms (20–49): these are internet users that are occasional users who may over-use at times but generally have control over their usage.
2. Moderate addictive symptoms (50–69): these are individuals who experience occasional or frequent problems because of time spent on the internet. These users may have difficulties relating internet use to its subsequent consequences.
3. 3. Severe addictive symptoms (80–100): For this population, internet usage is causing significant problems related to time management, craving, or thinking about internet use when unavailable, inability to abide by personal time limits for the use of the internet, etc.

Limitations of the Study

The primary limitations of this research were the following:

Sample of the study: this was selected only from An-Najah National University students in Palestine. While students are found to be representative of the geographic areas of Palestine, their economic and educational status is unique and may affect the generalizability of the findings.

Study instrument and its psychometric characteristics (Internet Addiction Test, IAT) has not been tested for this population specifically and may produce atypical results.

Results

1. Results of first question, what is the level of social media usage among An- Najah National University Students? To answer this question, a total of 744 out of 850 participants returned valid questionnaires with a response rate of 88%. When asked about the average of internet using, about 53% of the respondents scored in the range of NO TO MILD ADDICTIVE SYMPTOMS, 42.3% scored within the range of MODERATE

ADDICTION (occasional or frequent problems because of the internet), and 4.7% fell into the category of SEVERE ADDICTIVE SYMPTOMS (internet usage causes significant problems in the life of the user). Tables 2 and 3 show the detailed answers on internet usage.

To test the significant differences in social media usage, Chi-Square test was calculated as shown in Table 3. Results show significant differences in social media usage among ANNU students.

- Results of second question, are there significant differences in social media addiction among An-Najah National University students due to study variables: gender and academic level?

To answer this question, Internet Addiction Scores were analyzed by demographic variables including gender and academic level by two-way ANOVA test. Results show significant differences between males and females with the total scores of males being significantly higher than females (male mean was 52.92 in contrast of females' mean 47.54). In the area of academic level (Bachelors vs Masters), results show significant differences between BA level and MA level (BA level mean was 50.68 in contrast of MA level mean 43.52). This finding may be confounded by the variables of age and marital status which may also differentiate the groups in a significant manner. Details are shown in Tables 4 and 5.

Discussion

The results of the current study reinforce general knowledge related to the overuse of internet social media sites in older adolescent populations. The number of youth exhibiting addictive like use was 47% (which is very high as compared to studies in other societies), while as found previously, males were at significantly higher risk than females (Van Rooij 2011).

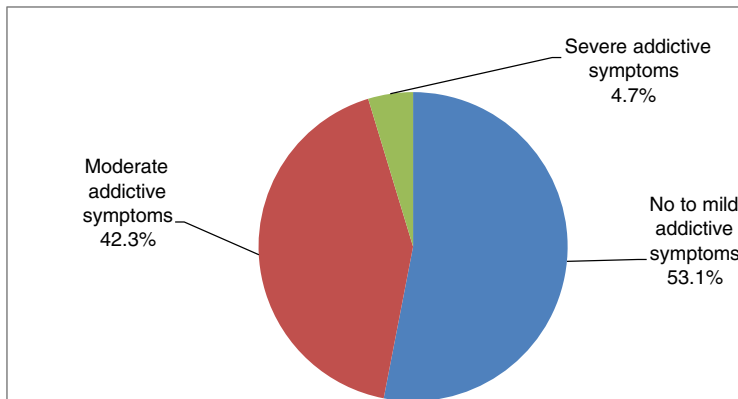
As previously mentioned, the geographic vulnerabilities of youth residing in Palestine are high. There are very few venues for entertainment for youth and there is a high level of restriction of movement related to cultural and geographical restraints (checkpoints, lack of reliable public transportation, and limited access of youth to private vehicles). In addition, the stress and uncertainty of living in a highly volatile situation, over which you have little control, increases the desire for escapism and a higher vulnerability for addictive patterns to form as we see in the high levels of addictive symptoms related to internet use in the population. This finding coordinates with Cheng and Li (2014), who found that Middle Eastern countries in general were experiencing higher levels of internet addiction with a prevalence level of over

Table 2 Level of internet usage among participants ($N = 744$)

Internet usage	Frequency (%)
No to mild addictive symptoms	394 (53.1)
Moderate addictive symptoms	315 (42.3)
Severe addictive symptoms	35 (4.7)

Table 3 Results of Chi-Square to test the differences in social media usage

Internet usage	Observed N	Expected N	DF	Chi-Square Value	Sig
Mild	394	248.0	2	286.99	0.000*
Moderate	315	248.0			
Severe	35	248.0			
Total	744				



10%, significantly higher than in European countries or the over average globally which was approximately 6%.

There have been two major theories linking internet addiction to country characteristics. One theory ascribes addictive behaviors to general accessibility and leisure time (related to geographic economic well-being). The alternative proposes that addiction is inversely related to both geographic “quality of life” including perception of life satisfaction as well as actual indicators such as pollution, traffic, and economic prosperity. In an international meta-analysis by Cheng and Li (2014), it was found that higher levels of internet addiction appeared to be

Table 4 Means, standard deviations on Social Media Addiction test according to study variables

Gender	Academic level	Mean	S.D.	N
Male	BA	53.45	15.86	359
	MA	40.80	12.87	15
	Total	52.94	15.93	374
Female	BA	47.76	15.19	341
	MA	44.93	14.40	29
	Total	47.54	15.13	370
Total	BA	50.68	15.78	700
	MA	43.52	13.89	44
	Total	50.26	15.76	744

Table 5 Results of two-way ANOVA on Social Media Addiction test according to study variables

Source	SS	DF	MS	F	Sig
Academic level	1619.444	1	1619.444	6.757	0.010*
Gender	4925.525	1	4925.525	20.552	0.000**
Error	177,590.309	741	239.663		
Total	184,135.278	743			

A. *R Squared* = .914 (adjusted *R squared* = .914)

* Significant at the 0.05 level (2 tailed); ** Significant at the 0.01 level (2 tailed)

related to negative country factors. The present study appears to support this line of reasoning as well. Internet use related to social networks may not be taken into consideration as a “serious” addiction as the visible consequences of overuse are not easily calculated or obvious as in gambling or substance abuse. Physical symptoms, interrupted sleep patterns, interference with study, and decreasing initiative for real world activities (Kuss and Griffiths 2011) have been suggested, but further research is needed to clearly ascertain the price of internet loss on a particular community or the society at large.

Further relationships between psychological characteristics and co-morbid diagnosis have been inconsistent. Shokri et al. (2017) found a low relationship between impulsivity and internet addiction in Iranian college students, with no related gender differential, despite previous findings to the contrary. Hasvnujuj (2016) found no negative correlation between loneliness and internet addiction rates in Albanian youth in contradiction to her own predictions. Clearly, new models of both etiology and effect of internet addiction must be proposed if we are to explore the psychological and behavioral factors in the acquisition and maintenance of internet addiction.

In addition, as the study relied on self-report, it is not clear if factors related to impression management affected the results such that true levels of social media addiction are not adequately represented. Byun et al. (2009), completed a 10-year meta-analysis that criticized the lack of defined criteria for social media addiction, the over focus on university students as subjects in internet addiction research, and the overreliance on self-report measures in this area. Further investigations including actuarial data collection with increasingly diverse populations is highly suggested.

Treatment for internet addiction, even in developed nations, is scarce, lacking in evidence-based models and valid and reliable methodologies. In Palestine, currently there are no treatment options for individuals exhibiting addictive social media behavior patterns. One promising program, PIPTATIC, looks at providing an individualized program including psycho-education, family support, and practice with social skills, as well as stimulus control, and has demonstrated preliminary success (Torres-Rodriguez et al. 2017). Such treatment options need to be offered and monitored in a Palestinian context to investigate their ability to be applied and validated in areas of geographic stress.

What is clear in the current findings is that while social media usage is a factor in the lives of many adolescents, if the young adult has limited access to alternative options for socialization, and has increased community based stress, the risk for addictive patterns of use to emerge is much greater. This understanding urges further steps by community and political leaders to provide both alternatives and information, so that vulnerable youth have a variety of safe and healthy options for socialization, that they and their parents receive information on the

harm and warning signs of internet addiction, and that vulnerable youth have access to services to manage the stress of living in a geographic area of risk.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest. No funding was received for this study.

Ethical Approval All procedures performed in this study involving human participants were in accordance with the ethical standards of University's Research Ethics Board and with the 1975 Helsinki Declaration.

Informed Consent Informed consent was obtained from all participants.

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