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To cite this article: Joseph El-Khoury, Riwa Haidar, Rama Rand Kanj, Linda Bou Ali & Ghaidaa Majari (2021) Characteristics of social media 'detoxification' in university students, *Libyan Journal of Medicine*, 16:1, 1846861, DOI: [10.1080/19932820.2020.1846861](https://doi.org/10.1080/19932820.2020.1846861)

To link to this article: <https://doi.org/10.1080/19932820.2020.1846861>



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Published online: 29 Nov 2020.



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Characteristics of social media 'detoxification' in university students

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ABSTRACT

The multiplication of social networking sites has led to increased frequency of use among young adults. While the association with mental wellbeing is still controversial, high levels of social media use were correlated with problematic behaviours, low self-esteem and depressive symptoms. 'Social Media Detoxification' (Detox) is the term used to describe voluntary attempts at reducing or stopping social media use to improve wellbeing. We conducted a pilot study to explore the characteristics of social media detoxification applied by 68 university students in their social media activity. Descriptive analysis revealed that most students reported a positive change in mood, reduced anxiety and improved sleep during and in the immediate aftermath of the detoxification period. These preliminary findings show that 'social media detoxification' is a phenomenon understood and used by university students to moderate their social media use. Wide variability in its application and effects is noted in our sample.

ARTICLE HISTORY

Received 7 July 2020
Accepted 2 November 2020

KEYWORDS

Social media detoxification; digital detoxification; social media addiction; internet-use disorders; problematic social networks use



1. Introduction

In the last decade, increased online connectivity and access to new technologies such as smartphones have paved the way for social media to become a prominent method for social interaction and access to information. Between 2005 and 2019 the prevalence of social media use amongst US adults rose from 5% to over 70%. Using social media platforms is more common among adolescents with 71% of accessing more than one social media platform [1]. The term *Internet addiction* encompasses 'poorly controlled preoccupations, urges or behaviors regarding computer use and internet access that lead to impairment or distress' [2]. More selective categories have been proposed that take into consideration the interface used, the type of activity or the behavioural implications. They include terms such as *social media addiction*, *computer addiction*, incorporating gaming and programming, and *net compulsions* for gambling, shopping, and stock trading that takes place predominantly online. Progress is being made towards the inclusion of these categories into international classifications [3]. Gaming addiction is the first computer-based behavioural addiction to be recognized as a disorder in the last revision of the International Classification of Diseases (ICD 11), approved in 2018 [4]. Neither the ICD 11 nor the DSM-5 considers social media addiction as a disorder. Nevertheless, according to [5], the DSM-5 does refer to it as worthy of further exploration. Globally, the prevalence of internet addiction in the Middle East is the highest (10.9%)

compared to a global average of 6%. A correlation with accessibility to the internet and dissatisfaction with life quality was found [6]. Less is known on problematic social media use.

1.1. Social media use and mental health

Psychiatric morbidity has been associated with internet addiction. It includes mood disorders, anxiety disorders, substance use disorders, psychotic disorders, impulse control disorders and distress [6–8]. Of adolescents, 4.5% were found to be at risk of problematic social media use [9]. Social media addiction was associated with low self-esteem [10], poor life satisfaction [11], sleep disturbances [12,13]. Facebook addiction was associated with loneliness, social impairment in addition to depression, anxiety, insomnia, somatic symptoms [14,15]. A recent study found an association between social media use and poor academic performance in medical students [16]. For extreme social media use to qualify as a 'use disorder' requires observation of the set of signs and symptoms consistent with all addictive behaviours. Tolerance, withdrawal, conflict, salience, and relapse have been explored in individuals using validated questionnaires such as Young's Internet Addiction Test (IAT) [17] and the Bergen Social Media Addiction Scale (BSMAS) [12]. Of all the symptoms normally associated with dependence, withdrawal following the interruption of social media use was the most prominent [9,18].

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This manuscript has not been published and is not under consideration for publication elsewhere.

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1.2. Social media detoxification

Digital detoxification is the term widely adopted in popular culture as a method to address perceived overuse of the internet. The Oxford dictionary defines it as: 'A period of time during which a person refrains from using electronic devices such as smartphones or computers, regarded as an opportunity to reduce stress or focus on social interaction in the physical world' [19]. Social media detoxification applies the same principles to the conscious interruption or restriction of the use of social media platforms exclusively. Despite this obvious distinction in scope, digital and social media detoxification are often used interchangeably. Several newspaper articles provide advice on how and where to do a digital detox [20]. The widely read Huffington Post claimed that detoxification has the benefits on mental wellbeing, social connectivity, professional productivity, and cognitive processes [21]. A cultural movement calling for abstinence from social media is increasingly popular [22] leading to the growth of a dedicated self-help and rehabilitation industry [23]. Physically preventing access to online devices seems necessary in the most severe cases [23,24]. Despite public awareness of the concept, the academic literature has been slow to establish the correlates and characteristics of social media detoxification while evaluating any impact on mental well-being. To the exception of the three questions on attempts at reducing the use of social media in the Social Media Disorder Scale [18], the currently available methods used to assess for internet or social media addiction are not specifically concerned with this important aspect of dependence.

This study serves as a pilot to explore the extent of exposure to social media detoxification in a sample of university students. The study reveals insight on their awareness of social media detoxification, their personal engagement in it and the presence of any mental health implications.

2. Method

2.1. Participants and procedure

A quantitative cross-sectional online survey design was adopted for the purpose of this study. The sample included 68 undergraduate students from the (blinded for the review), 31 females and 37 males. Participants were at least 18 years old. The Registrar office at (blinded for the review) provided the authors with a list of emails of 1000 student randomly picked from each faculty. Inclusion criteria included undergraduate students at the University during the academic year 2018–2019. Email invitations were sent anonymously through an open-source online survey tool (Lime Survey) linked to an individualized token. Prior to completing the questionnaire, an information

sheet was provided explaining the aims of the study and a consent form included the link to the survey. A total of three reminders were sent at two weeks interval. All data and information were stored securely. Ethical approval was granted by the Institutional Review Board (IRB) at the (blinded for the review) prior to commencing the research project. The IRB is responsible to review and approve the conduct of research involving human subjects at the (blinded for the review).

2.2. Instruments

Few studies have attempted to test for psychometric validation and reliability of a social media addiction scale particularly among young adults [18]. Al-Menayes (2015) explored psychometric properties of the Arabic version of the SMAS (Social Media Addiction Scale) and found it to be a valid measure and Van den Eijnden et al., (2016) showed that the 9 items SMD (Social Media Disorder) scale showed appropriate internal consistency and test-retest reliability. While these scales measure social media addiction, none of their items refer to detoxification behaviour. To our knowledge, a scale that investigates social media detoxification behaviour rather than addiction does not exist. In the absence of any specific reference to social media detoxification in validated scales, the authors who have formal expertise in the diagnosis and treatment of behavioural addictions devised a 23-item questionnaire to serve the purpose of this pilot study. The questionnaire was divided into three sections: the first section requested demographic information concerning gender, age and field of study; the second section explored social media use and its impact on the participants' health and social life; the third section addressed social media detoxification of which one part was only accessed by participants who answered *yes* on the following question 'have you voluntarily ever gone through a period of Social Media Detoxification?'. Participants were asked to choose the answer that best corresponds to their social media use or provide a rating on a 5-point Likert Scale spanning from Strongly disagree (1) to Strongly agree (5) (e.g. 'you become restless or troubled if you have been prohibited from using social media') (Table 1).

Data was analysed using SPSS version 24.0. Descriptive statistics were generated to understand participants' demographics including frequencies of each variable's characteristics. Pearson's Chi-Square was calculated to investigate any statistically significant associations between engagements in social media detoxification and these following variables: negative and positive change of mood, better and reduced professional productivity, improved and worsened relationships, increased and decreased anxiety, and finally improved and worsened sleep. Furthermore, a binary logistic regression was conducted to assess whether belief of time spent on social media predicted the desire to cut down time spent on social media. Finally, frequencies for lengths of social media detox, reported

Table 1. Questionnaire to assess social media use and detoxification.

Section 1	
What is your gender?	
What is your age group?	
Indicate your field of study.	
Section 2	
How many social media platforms (Facebook, Instagram, Twitter, Snapchat, etc.) are you active on (i.e. you use at least once a week)?	
How much time per day do you spend on social media (all platforms included)?	
You believe that you spend too much time using social media	
You would like to cut down on the time you spend on social media	
You have been told before that you spend too much time using social media	
Your use of social media affects your academic performance negatively	
Your use of social media affects your level of physical activity (sports, offline activities, etc.) negatively	
You use social media to reduce feelings of guilt, anxiety, helplessness, and depression	
You become restless or troubled if you have been prohibited from using social media	
You tend to ignore your partner, family members, or friends because of social media	
Have you ever heard about the term 'Social Media Detoxification or Detox'?	
Have you voluntarily ever gone through a period of Social Media Detoxification?	
Section 3	
When you did your social media detox, which sentence below describes your experience?	
Which social media platform do you find most difficult to stop using. During the period of social media detox, did you experience any of the following?	
You returned to social media use	
What was the longest period of time you have ever spent voluntarily disconnected from all social media?	
Following the end of the social media detox period did you experience any lasting benefits?	
Would you consider going through a social media detox in the future?	
Would you consider seeking help from a mental health professional in order to do so?	

lasting benefits and reasons for return to social media were analysed and computed.

3. Results

3.1. Demographics

From the 1000 students who received the email invitation and reminders, a total of 68 responses were collected. Fifty-five per cent ($N = 37$) of respondents were male and 45% ($N = 31$). Forty per cent ($N = 27$) were from the faculty of arts and sciences and 39% ($N = 26$) from the faculty of engineering and architecture. Their age group stretched from 18 to 30. Table 2 provides an overview of the sample characteristics. To determine whether the sample was representative of the (blinded for the review) student population, Chi-Square tests were conducted against available public data. Results suggested that it was representative for gender ($p = .02$) but not for field of study ($p = .40$). Age comparison was not available.

When asked how many hours per day participants spend on social media platforms, 9% ($N = 6$) reported less than 30 minutes, 28% ($N = 19$) 1 to 2 hours, 37% ($N = 25$) 2 to 4 hours, 24% ($N = 16$) 4 to 6 hours and 3% ($N = 2$) spend more than 6 hours per day (refer to Table 2). Additionally, 62% ($N = 42$) of students reported they have previously heard of social media detoxification.

3.2. Demographic differences between groups

When comparing demographic data between students who had responded negatively to undertaking a digital detox and those who had undergone one, there was a marginally significant association between gender and individuals who did undergo a detox (refer to Table 2) $\chi^2(4) = 7.1, p = .06$, which indicates that perhaps males ($N = 16, 59.3\%$) were more likely to undergo the detox than females ($N = 11, 40.7\%$). However, no significant

Table 2.Demographics ($N = 68$)

		N	Total (N=68)		T	Underwent Detox (N = 27)		Chi-Square
			%			N	%	
Gender	Female	31	45.6	3.3*	11	40.7	7.1*	
	Male	37	54.4		16	59.3		
Age Group	Under 21	56	82.3	3.8	20	74.1	7.2	
	22–25	10	14.7		5	18.5		
	26–29	1	1.5		1	3.7		
	Above 29	1	1.5		1	3.7		
Field of Study	Business	6	8.8	9.6	0	0	10.9	
	Arts and Sciences	27	39.7		13	48.1		
	Engineering and Architecture	26	38.2		8	29.6		
	Health Science	5	7.4		3	11.1		
	Medicine	1	1.5		1	3.7		
	Agriculture and Food Sciences	2	2.9		1	3.7		
	Other	1	1.5		1	3.7		
Number of Platforms used	1	13	19.1	5.6	4	14.8	10.2	
	2	15	22.1		3	11.1		
	3	20	29.4		10	39.1		
	4	14	20.6		8	29.6		
	More than 4	6	8.8		2	7.4		
Time spent on SM	Less than 30 minutes	6	8.8	4.8	2	7.4	11.5	
	1 to 2 Hours	19	27.9		5	18.5		
	2 to 4 Hours	25	36.8		12	44.4		
	4 to 6 Hours	16	23.5		8	29.6		
	More than 6 Hours	2	2.9		0	0		

associations ($p > .05$) were found in the number of social media platforms used and time spent on social media per day (refer to Table 2).

3.3. Concerns associated with social media usage

In the overall sample ($N = 68$), the majority of participants ($N = 39, 57\%$) believed they spend too much time on social media and would like to cut it down ($N = 39, 57\%$). Chi-Square tests were conducted. Results revealed that students that were told they spend too much time on social media were more likely to have insight into it $\chi^2(4) = 15.60, p = .004$. They were also more willing to cut down on this time spent $r = .71, p$

Table 3. Individual Experience Reported during Period of Digital Detoxification ($N = 27$).

	Count	%
Negative Change in Mood	2	2.94
Positive Change in Mood	12	17.6
Better Professional Productivity	17	25.1
Reduced Professional Productivity	3	4.4
Improved Relationships with Friends/ Family	7	10.3
Worsened Relationships with Friends/ Family	2	2.9
Increased Anxiety	4	5.8
Reduced Anxiety	11	16.2
Improved Sleep	15	22.1
Worsened Sleep	1	1.5

Note. Count = number of times each answer was selected, students had the option to pick more than one response.

$< .01$ revealing concordance between attitude and behaviour.

Nearly half ($N = 30, 44\%$) of the sample reported no negative effect of social media usage on their academic performance. However, 31% ($N = 21$) found it to negatively impact their level of physical activity. Interestingly, most students ($N = 42, 62\%$) denied feeling restless or troubled when prohibited from using social media, or it is impacting on interpersonal time ($N = 46, 68\%$).

Results revealed that 27 (40%) students voluntarily went through a period of social media detoxification (refer to Table 2). When asked which sentence best described their experience, 41% ($N = 11$) reported they stopped using all social media platforms, 18% ($N = 5$) reduced the frequency and length of integrations of some platforms, 18% ($N = 5$) stopped visiting some but continued using others and 23% ($N = 6$) only used social media for essential communication purposes. Interestingly, Instagram was the social media platforms that was found the most difficult to stop using in these students (75%, $N = 20$) (refer to Figure 1). Although most students who underwent the detox ($N = 27$) reported positive changes in their mood, better academic productivity, reduced anxiety and improved sleep (Table 3), results did not reveal any statistically significant association with the

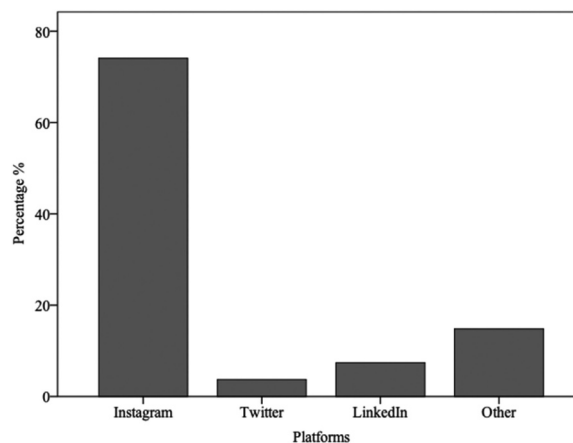


Figure 1. Platform Identified as Most Difficult to Stop Using by Students.

following variables: negative change in mood, positive change in mood, better professional productivity, reduced professional productivity, improved relationships with friends/family, worsened relationships with friends/family, increased anxiety, reduced anxiety, improved sleep and worsened sleep.

3.4. Lasting benefits of digital detox

The longest period of time spent disconnected from all social media varied across the sample whereby 24% ($N = 16$) of students reported it to be less than 1 day, 30% ($N = 20$) for 1 to 3 days, 15% ($N = 10$) for 3 to 5 days, 10% ($N = 7$) for 5 to 7 days. Twenty-two per cent ($N = 15$) of those who had undergone a detoxification period sustained it beyond 7 days. Following the end of the detoxification period, all participants returned to social media. Their primary motivation for terminating detox was because they felt their purpose of detox was achieved ($N = 10, 37\%$). Others feared they were missing out on activities and events ($N = 8, 30\%$).

Almost half of the participants would consider going through a social media detox in the future (46%). On the other hand, 65% ($N = 44$) of those surveyed stated they would not consider seeking help from a mental health professional for social media detoxification purposes, while another 20% ($N = 13$) were unsure.

4. Discussion

The study reveals that 'digital detox' is a commonly understood term amongst surveyed students. This suggests awareness of problematic patterns of use of social media is wide, even in the absence of a clear definition and of an agreed nomenclature. A strong positive correlation was found between individuals who believed they spend too much time on social media and their willingness to cut down on this time

spent. A similar correlation was found between being told by others that you spend too much time on social media and your own beliefs. Despite the majority not believing that time spent had a negative impact on academic performance, physical activity and relationships, 40% of the sample had undergone a period of digital detox. There was no significant demographic difference between the group that engaged in detoxification vs the one who did not except for gender (marginal significance, $p = .06$). Wide variability was found in the approach to digital detox, in particular to whether it was complete or partial and also with regards to duration. A range of difficulties consistent with a state of psychological withdrawal were reported by individuals putting themselves through 'social media detox'. Interestingly, the picture-based Instagram app was rated as the most difficult to stop using. At the other end of the spectrum, Facebook despite being one of the most widely used was not identified as a difficult platform to stop using. This discrepancy may be related to the differences in the interface format (picture vs text based), the personal function (messaging vs posting, etc.) of each social networking site or the algorithm it relies on to entice users to interact with it or through it. Overall during the digital detox period, most students reported positive change in mood, better professional productivity, reduced anxiety and improved sleep. They returned to social media primarily because they felt that the purpose of the detox was achieved and secondarily for fear of missing out on events and activities. The findings reflect recent explorations of this concept in the literature. A small study from the UK where university students were subjected to a 24 hours 'detox' from their smartphones failed to replicate the expected dysphoria and anxiety in other addictions. Craving was the only dimension significantly reported by participants. Besides the small number of participants (45) and the short time over which they were separated from their phones, the experiment does not capture the difference between losing access to all digital activities and social media specifically [25,26]. A common challenge is to establish the threshold at which the essential contribution of social networks in personal, academic and professional life is overshadowed by negative interference through overutilization or impact on mental health. This threshold is likely to vary between individuals according to parameter that is yet to be understood. The subjective need for a 'detox' and how it is adopted by the public deserves further investigation. In our sample, it was unclear how these perceived benefits persisted beyond the actual period of detoxification and how much of this sense of wellbeing was diluted by the anxiety of the 'fear of missing out', of being excluded or having to rely on alternative, sometimes unfamiliar means to

remain socially active. Given the variations mentioned earlier, it would be impossible to draw definite conclusions on what can be considered a meaningful detoxification, even less a beneficial one. Almost half (46%) of the total sample would be interested in trying social media detoxification in the future, which suggests a potential therapeutic benefit. Future research can extend our findings to a larger group of university students or other populations in order to enhance generalizability and assess for effects of variables. It is also encouraged to adopt a mixed approach which would quantify and qualify responses as variables that are dealt with in the current study encompass emotional as well as behavioural patterns. Social media detoxification is a newly developed construct. As mentioned in the literature review social media has been associated with anxiety disorders, sleep disturbances, low self-esteem, poor academic performance and distress [6,7,11–13]. It is thus crucial to continue in the investigation of this newly developed construct in order to comprehend its relationship and potential benefits to relating factors.

The role for mental health professionals in addressing problematic social media use seems premature in the public mind. The overwhelming majority stated they would not consider professional help for this matter. More work is needed to identify the extent to which psychiatrists and psychologists can transfer their experience from treating other behavioural addictions to problematic social media use. Periods of planned abstinence or controlled use are both established components of treatment for substance-based and behavioural addictions. As such, it is likely 'social media detox' will become part and parcel of treatment protocols if this condition is to be recognized officially as a clinical syndrome. Understanding its characteristics and predicting its therapeutic potential should be an essential research focus for clinicians and public health experts.

5. Limitations

Several limitations emerged during the implementation of this study. The first one relates to the low response rate of the participants. Although there is no evidence of response bias, the response rate was below expectations. As such, this pilot may not claim high generalizability to the local community. One explanation for this limitation is the unfamiliarity with the concept of 'social media detox' while another one is that students at the (blinded for the review) receive too many emails asking them to participate in studies and tend to ignore them. Other unrelated surveys of the same population received a similar response rate. Given the difficulty in gathering responses, adopting a mixed approach with the introduction of a qualitative component may have

allowed for a better understanding of the variables and how they affect participants. Another limitation is the use of a non-standardized measure to explore social media detoxification. Due to the lack of a developed scale that evaluates this particular construct and the paucity of studies on social media detoxification in Arab populations, the authors opted to design a questionnaire to serve the purpose of this pilot.

6. Conclusion

Problematic use of social media is present in the sample of university students who responded to the survey. 'Social Media Detox' is a term many understood to be an intentional interruption of this use with the aim of improving mental wellbeing and functionality. A smaller but significant number engaged in this process of interruption with wide variation in implementation. It is unclear whether perceived short-term benefits persisted beyond the immediate aftermath. Larger studies are required to ascertain the prevalence of 'Social Media Detox' in the wider population and to establish it as further element of a dependency that may be specific to social media use beyond internet addiction.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

All authors have read and approved the paper. This study did not receive any funding.

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