INFORMATION & COMMUNICATIONS TECHNOLOGY IN EDUCATION | RESEARCH ARTICLE

Social media use among university students in Jordan and its impact on their dietary habits and physical activity

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Abstract: This study aimed to assess the impact of university students’ social media use on their dietary habits and physical activity. In total, 57.7% of the participating students used social media platforms to post about their food, and 46.4% used these platforms to plan activities related to their health. Snapchat and Facebook were the platforms most used by the students to post about food, dietary habits, and physical activity. Students who posted about their physical activity were more committed to doing moderate to vigorous physical activity. Students who posted about their physical activity and fitness goals on social media perceived themselves to be more active than their counterparts and were less likely to describe their health as poor. Faculty members and university administrators can promote social media benefits to enhance the students’ health behaviors by disseminating different health-related messages.

Subjects: Health Psychology; Social Influence; Behaviour

Keywords: social media sites; the impacts of social media; social media use; university students; physical activity; weight; dietary habits

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PUBLIC INTEREST STATEMENT

Social media is a powerful tool used globally by many people to communicate and exchange information about different health-related issues. Evidence shows that social media platforms influence one’s health decisions about adopting new healthy behaviors. University students in their everyday activities use social media; they rely on these sites as a source of information to look for health-related information regarding their diet and physical activity. Since there are limited data about the impact of social media on the university student’s perceptions and lifestyle behaviors regarding their dietary habits and physical activity, this study will serve as an essential first step in identifying baseline data to develop social media intervention programs to enhance student’s dietary habits and physical activity. This study suggests that universities must benefit from the SM platforms to publish different health-related messages to enhance overall health.

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1. Introduction

Social media has become an essential part of people's daily activities and significantly affects individuals' lives (Tripathi et al., 2018). Social media platforms, including Facebook, Instagram, Snapchat, Twitter, and WhatsApp, remain an essential communication tool worldwide. These platforms can influence all aspects of individuals' lives (Jane et al., 2018). The benefits of social media also include facilitating information exchange between users, including health-related information (Wolf et al., 2018). Consequently, many individuals' health decisions and behaviors are influenced by social media platforms (Giustini et al., 2018).

Social media sites are used as sources of health-related information and promoting students' overall health (Hill, 2013) by encouraging them to follow healthier diets and increase their physical activity (Welch et al., 2016). Previous studies indicated that social media influences adults' behaviors and perceptions of their nutrition and physical activity. For example, a study among adults aged 18 years or over found that social networking sites (SNSs), such as Facebook, positively influenced the participants' dietary habits, as they provide users with a source of social support and reinforcement from the public. In turn, this increases users' engagement with online nutritional and educational programs (Dagan et al., 2015). The results of a systematic review study revealed that using social media to publish health information related to smoking, physical activity, and nutrition is an inexpensive way of promoting health and increasing individuals' engagement in physical activity (Johns et al., 2017). Moreover, social media sites positively impact students' physical activity levels, and social media campaigns were found to increase the likelihood of students achieving sufficient walking by 53% of the target (Abioye et al., 2013).

According to the World Health Organization (WHO), more than 1.9 billion adults aged 18 years or over were overweight, and 650 million were obese (World Health Organization, 2017). Worldwide, in 2018, more than 80% of adolescents and 1 in 4 adults were physically inactive (World Health Organization, 2018). University students are continuously challenged to make healthy food choices (Deliens, Clarys, Bourdeaudhuij & Deforche, 2014), and their lifestyles are considered a significant indicator of their health in adulthood (Lawrence et al., 2017). Many factors can affect university students' dietary choices and physical activity levels, including the macro environment, media, and advertising, particularly the advertising of certain types of food (Deliens et al., 2014). Social media platforms are easy to use and allow students to discuss various topics and share different aspects of their lifestyles and health behaviors (Hill, 2013).

Jordanian society, like any other country, has been affected significantly by the global spread and usage of social media and technology. According to the Global Digital Report, by the early of the first quarter of the year 2017, there were 5.80 million monthly active users of the Facebook site compared with 1.80 monthly active users on the Instagram site. Jordanian Approach to Social Media Communications indicates that different types of social media affect the population's lifestyle, 65% of the total Jordanian population used Facebook, and 41.3% were daily active users on this application. Jordan is the third among the Arab countries in the daily active users of Facebook (Salem, 2017).

Few studies explain the Jordanian population's dietary habits and physical activity. Jordanian university students have a lower score in total physical activity and nutrition, and this is related to the inaccessibility of sports and exercise facilities, which reduces the student's interest in the engagement with different exercises (Al-Khawaldeh, 2014). Therefore, the current study aimed to determine the impacts of social media use on university students' dietary habits and physical activity.

This study sought to answer the following questions:

(1) Which social media platforms are used by university students, and how frequently are these platforms used?
(2) What are the health-related reasons that university students use social media?

(3) What is the relationship between social media use and students' lifestyle behaviors (i.e., physical activity, dietary habits, and weight)?

2. Methods
A cross-sectional correlational design was used for this study. The study setting included four universities (two private and two governmental) in two cities in Jordan.

2.1. Sample and sampling procedure
A multistage random sampling technique was used to recruit the participants. First, two separate lists of all the private and governmental universities in the two cities were prepared, and then one private university and one governmental university were randomly selected from each list. This was followed by obtaining a list of the registered courses, including all elective courses with the largest number of students, from the registration offices at the chosen universities. Finally, courses were randomly selected from the lists. The inclusion criteria for the participants were full-time, Jordanian undergraduate students (males and females) from all specialties (health and non-health).

2.2. Measurements
The self-reported questionnaire developed by Hill (2013) was used to collect data from the students. The English version of the self-reported questionnaire comprises five different sections that assess students' demographic data, social media use, physical activity, dietary habits, and overall health, health information, and opinions. For the current study, only the following three sections were used:

2.2.1. Socio-demographic information
This section consists of five items related to gender (i.e., male or female); age; study major (i.e., health or non-health); study level (i.e., first, second, third, or fourth year and above); and type of university (i.e., governmental, or private).

2.2.2. Social media
This section measures students' regular use of social media, regardless of whether a computer or mobile device is used. The first question asks the respondents to report the frequency of their average daily use of social media sites (i.e., Facebook, Twitter, Instagram, Snapchat, YouTube, blogs/vlogs, Pinterest, or WhatsApp) over the preceding seven days. The question is scored on a scale ranging from 1 (I do not use this platform) to 6 (less than one hour per day). The second question asks the respondents to report their use (or lack of use) of each social media site to find and share health information related to lifestyle behaviors, physical activity, diet, and perceptions of weight and health. The respondents are also asked to evaluate their friends' use of these platforms.

2.2.3. Actual physical activity
This section consists of seven items aimed at evaluating students' physical activity over the preceding seven days. The first three items ask respondents to rate their physical activity levels ranged from vigorous to moderate walking and to report the number of hours per week they spent doing physical activity. The other four items ask the respondents to report the number of hours per day they spent playing video games, using a computer or electronic device, sitting and watching TV or movies, and using social media sites.

2.2.4. Perceptions of physical activity
This section consists of three items to evaluate students' perceptions about their physical activity. The first item asks the respondents to rate how active they are as compared to most women/men their age using a three-point Likert scale with 1 = “less active”, 2 = “about the same”, and
3 = “more active”. The second item asks the respondents to rate their current health status using a five-point Likert scale ranging from 1 (excellent) to 5 (poor). The third item asks the respondents to rate whether they perceived their physical activity level to play an important role in their overall health using a six-point Likert scale ranging from 1 (strongly agree) to 6 (strongly disagree).

2.2.5. Perceptions of weight
This section comprises four items. The first item asks the respondents to describe their weight according to five categories ranging from 1 (very underweight) to 5 (very overweight). The second item assesses students’ attempts to change their weight and is scored on a four-point Likert scale ranging from 1 (lose weight) to 4 (I am not trying to do anything about my weight). The third item assesses whether the respondents perceive themselves to have control over their weight and is scored on a six-point Likert scale ranging from 1 (strongly agree) to 6 (strongly disagree). Finally, the fourth item asks respondents to report their current weight and height to calculate and assess body mass index (BMI).

2.3. Study procedure
After obtaining all approvals from the institutional review board (IRB) committees at the selected universities, the principal investigator (PI) approached each university’s registration department to obtain a list of the students registered on elective courses. After selecting the courses, the groups with the greatest number of registered students were randomly selected. The researchers then contacted the teachers of the chosen groups asking for permission to take some time out of their lectures to introduce the survey to the students. The students were approached in their classrooms. The study’s nature, purpose, potential risks, and procedures were explained, and students who agreed to participate in the study were asked to sign an informed consent. The PI and trained research assistants were available in the classrooms to answer any questions and provide clarifications. The students were asked to place the completed questionnaires in an envelope and hand the envelope to the PI.

3. Ethical considerations
Ethical approval was obtained from the Committee on Human Subjects Research at the authors’ institution (No. 67/117/2018). Permission to collect data was obtained from the selected universities, and approval to use the developed questionnaire was obtained from the original author.

4. Data analysis
Data were analyzed using Statistical Package for Social Science (SPSS®-PC version 25.0 for Windows. Descriptive statistics, including frequency, range, mean, median, and standard deviation (SD), described the socio-demographic data. Percentages, frequencies, means, and SDs were computed for the following items: social media use, reasons for social media use, dietary habits and physical activity, and sources of information related to weight, nutrition, physical activity, and dietary supplements. Multiple response analyses were used to describe the frequency of the use of social media for health-related behaviors. The independent samples t-test and Chi-square test were used to assess the relationship between the students’ actual physical activity and their perceptions about their health, diet, and physical activity and to compare between students who used social media for health-related messages and those who did not. The level of significance was set at P < 0.05.

5. Results

5.1. Characteristics of the study participants
Table 1 displays the characteristics of the participants. A total of 1070 students were approached, with 69 students excluded due to incomplete responses. Thus, a total of 1001 students completed the survey questionnaire and were included in the final analysis. Of the 1001 students, 59.2% (n = 593) were female and 40.8% (n = 408) were male. The students’ ages ranged from 18 to 32 years, and the median age was 20 years (SD = 2.08 years). Further, 69.5% (n = 696) of the
participants were from public universities and 30.5% (n = 305) from private universities. As with regards to year of study, 37.5% (n = 375) of the participants were first-year students, 21% (n = 210) second-year students, 19.6% (n = 196) third-year students, and 22% (n = 220) fourth-year students or above. The BMI of the students ranged from 15.6 to 65.3 kg/m2, with a mean BMI of 23.6 (SD = 4.99) (Table 1).

5.2. Social media use

Table 2 presents the frequency of use for eight social media sites, as reported by the students. Facebook was the most used site among the students (95.9% n = 960), followed by YouTube and WhatsApp (94.5%, n = 946 and 94%, n = 941, respectively). Instagram was used by 82.8% (n = 829) of the students and Snapchat by 77.1% (n = 772). The least commonly used sites were Twitter (22.3%, n = 223), Pinterest (17.2%, n = 172), and blogs/vlogs (9.7%, n = 97) (Table 2).

As for the frequency of use, 22.6% (n = 226) of the participating students reported using Facebook for one to two hours per day, whilst 21.6% (n = 216) reported using it for more than four hours per day. Meanwhile, 14.4% (n = 144), 13.5% (n = 135), and 11% (n = 110) of the students reported using YouTube, WhatsApp, and Instagram for more than four hours per day, respectively (Table 2).

5.3. Health-related reasons and social media use by students and their peers

Table 3 displays the frequencies and percentages for the different reasons for the use of social media sites. As illustrated in Tables 3, 67.8% (n = 679) of the students used social media sites to look up health-related topics, whilst 59.2% (n = 593) used social media to seek health-related support or advice from others. Moreover, 57.7% (n = 578) of the students used social media to post about their food or other activities (i.e., going out to eat or to the gym), and only 46.4% (n = 464) of the students used social media sites to make plans for activities related to their health (Table 3).

Snapchat and Facebook were the most used sites for posting about food and dietary habits (30.4%, n = 250 and 27.6%, n = 227, respectively) and physical activity (30%, n = 185 and 26%,

| Table 1. Characteristics of study participants (N = 1001) |
|---------------------------------------------------------|
| Item          | Category   | N (%)    |
|---------------|------------|----------|
| Gender        | Male       | 408 (40.8) |
|               | Female     | 593 (59.2) |
| Study major   | Medical    | 416 (41.6) |
|               | Non-medical| 585 (58.4) |
| Study level   | First      | 375 (37.5) |
|               | Second     | 210 (21.0) |
|               | Third      | 196 (19.6) |
|               | Fourth and above | 220 (22.0) |
| University    | Private    | 305 (30.5) |
|               | Public     | 696 (69.5) |
| Weight        | Underweight| 86 (8.6)  |
|               | Normal     | 605 (60.4) |
|               | Overweight | 231 (23.1) |
|               | Obese      | 79 (7.9)  |
| Age (mdn,SD,Range)* | -          | (20, 2.084, 18–32) |
| BMI (M, SD, Range) * | -          | (23.6, 4.99, 15.6–65.3) |

*mdn = median, SD = standard deviation, M = mean.
n = 160, respectively). Also, 28.6% (n = 55) of the students used Facebook to post about their weight, whilst 32.7% (n = 108) used it to post about their fitness goals (Table 3).

Moreover, 68.2% (n = 683) of the participating students reported that their friends used social media sites to post about their food habits or preferences, whilst 62.6% (n = 627) to post about their physical activity habits and preferences. Also, 36.2% (n = 362) reported that their friends used social media sites to post about their weight, and 44.8% (n = 448) to post about their fitness goals.

5.4. Students’ actual physical activity and their likelihood of posting about their physical activity on social media

The results of the t-test revealed that students who made posts about their physical activity on social media were more likely to be doing more vigorous (t (999) = −2.62, p = 0.009) or moderate physical activity each week (t (999) = −4.14, p < 0.001) than students who did not post about their physical activity (Table 4).

5.5. Students’ perceptions about their physical activity, fitness goals, dietary patterns, and weight and their likelihood of posting on social media

The results of the chi-square test revealed that there was a statistically significant relationship among the students between them posting about their physical activity on social media and their perceptions of their physical activity ($\chi^2(2) = 19.19, p < 0.001$), their health ($\chi^2(2) = 6.89, p = .032$), and the role of physical activity in their lives ($\chi^2(1) = 4.66, p = .031$). A post-hoc test revealed that students who posted about their physical activity on social media perceived themselves as more active than their counterparts (55.2% vs. 44.8) were less likely to rate their health as poor (36.4% vs. 63.6%) and were less likely to disagree with regards to the important role of physical activity in their lives (34.5% vs. 65.5%) (Table 5).

Furthermore, there was a statistically significant relationship among the students between them posting about their fitness goals and their perceptions of their physical activity ($\chi^2 (2) = 11.59, p = .003$) and of the important role of physical activity in their lives ($\chi^2 (1) = 5.60, p = .018$). The post-hoc test (standardized residual = −2.2 < 1.96) revealed that students who used social media to post about their fitness goals (19.6%) were likely to perceive themselves as more active than students who did not post about their fitness goals (80.4%) and were less likely to disagree that physical activity plays a vital role in their health (15.5% vs. 84.5%, standardized residual = −1.9 < 1.96) (Table 5). However, there was no significant relationship between students posting about their dietary habits and weight on social media and their perceptions of their dietary habits and weight (Table 6).

| Item           | Do not use this media N (%) | I use this media N (%) | < 1 hour/day N (%) | 1–2 hours/day N (%) | 2–3 hours/day N (%) | 3–4 hours/day N (%) | >4 hours/day N (%) |
|----------------|----------------------------|------------------------|-------------------|---------------------|---------------------|--------------------|-------------------|
| Facebook       | 41 (6.1)                  | 960 (95.9)             | 167 (16.7)        | 226 (22.6)          | 211 (21.1)          | 140 (14.0)         | 216 (21.6)        |
| Twitter        | 778 (77.7)                | 223 (22.3)             | 127 (12.7)        | 35 (3.5)            | 31 (3.1)            | 11 (1.1)           | 19 (1.9)          |
| Pinterest      | 29 (82.8)                 | 172 (17.2)             | 114 (11.4)        | 24 (2.4)            | 16 (1.6)            | 5 (0.5)            | 13 (1.3)          |
| Instagram      | 72 (17.2)                 | 829 (82.8)             | 236 (23.6)        | 219 (21.9)          | 145 (14.5)          | 119 (11.9)         | 110 (11.0)        |
| YouTube        | 55 (5.5)                  | 946 (94.5)             | 319 (31.9)        | 211 (21.1)          | 158 (15.8)          | 114 (11.4)         | 144 (14.4)        |
| Blog/Vlog      | 904 (90.3)                | 97 (9.7)               | 55 (5.5)          | 21 (2.1)            | 2 (0.2)             | 9 (0.9)            | 10 (1)            |
| Snapchat       | 229 (22.9)                | 1772 (77.1)            | 365 (36.5)        | 146 (14.6)          | 100 (10.0)          | 71 (7.1)           | 90 (9.0)          |
| WhatsApp       | 60 (6.0)                  | 941 (94.0)             | 360 (36.0)        | 216 (21.6)          | 132 (13.2)          | 98 (9.8)           | 135 (13.5)        |
Table 3. Health-related social media use by students and their peers (N = 1001)

| Item                                                                 | Use N (%) | at use N (%) | Facebook N (%) | Twitter N (%) | Pinterest N (%) | Instagram N (%) | YouTube N (%) | Blog/flog N (%) | Snapchat N (%) | WhatsApp N (%) |
|----------------------------------------------------------------------|-----------|--------------|----------------|---------------|-----------------|-----------------|---------------|----------------|----------------|----------------|
| I use this site to post about my food habits or likes.              | 562 (56.1)| 439 (43.9)    | 227 (27.6)     | 23 (2.8)      | 11 (1.3)        | 182 (22.1)      | 21 (2.6)      | 4 (0.5)        | 250 (30.4)      | 104 (12.7)      |
| I use this site to post about my physical activity habits/likes.    | 458 (45.8)| 543 (54.2)    | 160 (26.0)     | 35 (5.7)      | 12 (1.9)        | 145 (23.5)      | 23 (3.7)      | 0 (0)          | 185 (30.0)      | 56 (9.1)        |
| I use this site to post about my weight.                            | 170 (17.0)| 831 (83)      | 55 (28.6)      | 11 (5.7)      | 12 (6.3)        | 44 (22.9)       | 14 (7.3)      | 0 (0)          | 36 (18.8)       | 20 (10.4)       |
| I use this site to post about my fitness goals.                     | 264 (26.4)| 737 (73.6)    | 108 (32.7)     | 9 (2.7)       | 9 (2.7)         | 84 (25.5)       | 16 (4.8)      | 2 (0.6)        | 73 (22.1)       | 29 (8.8)        |
| My friends use this site to post about their food habits or likes.  | 683 (68.2)| 318 (31.8)    | 365 (32.3)     | 31 (2.7)      | 19 (1.7)        | 259 (22.9)      | 40 (3.5)      | 8 (0.7)        | 289 (25.6)      | 119 (10.5)      |
| My friends use this site to post about their physical activity habits/likes. | 627 (62.6)| 374 (37.4)    | 317 (32.0)     | 31 (3.1)      | 22 (2.2)        | 239 (24.1)      | 48 (4.8)      | 15 (1.5)       | 237 (23.9)      | 82 (8.3)        |
| My friends use this site to post about their weight.                | 362 (36.2)| 639 (63.8)    | 150 (30.5)     | 17 (3.5)      | 15 (3.1)        | 124 (25.3)      | 24 (4.9)      | 9 (1.8)        | 115 (23.4)      | 37 (7.5)        |

(Continued)
| Item                                                                 | Use N (%) | ot use N (%) | Facebook N (%) | Twitter N (%) | Pinterest N (%) | Instagram N (%) | YouTube N (%) | Blog/flog N (%) | Snapchat N (%) | WhatsApp N (%) |
|----------------------------------------------------------------------|-----------|--------------|----------------|---------------|----------------|----------------|---------------|----------------|----------------|----------------|
| My friends use this site to post about their fitness goals.         | 448 (44.8)| 553 (55.2)   | 198 (31.0)     | 23 (3.6)      | 15 (2.4)       | 165 (25.9)     | 46 (7.2)      | 9 (1.4)        | 135 (21.2)     | 47 (7.4)       |
| I use this site to look up health-related topics or interests.      | 679 (67.8)| 322 (32.2)   | 365 (36.3)     | 27 (2.7)      | 27 (2.7)       | 209 (20.8)     | 249 (24.8)    | 13 (1.3)       | 83 (8.3)       | 33 (3.3)       |
| I use this site to seek advice or support from others regarding my health. | 593 (59.2)| 408 (40.8)   | 320 (40.6)     | 34 (4.3)      | 21 (2.7)       | 127 (16.1)     | 142 (18.0)    | 7 (0.9)        | 61 (7.7)       | 77 (9.8)       |
| I use this site to make plans for group activities (i.e. going to the gym). | 464 (46.4)| 537 (53.6)   | 240 (40.5)     | 13 (2.2)      | 11 (1.9)       | 116 (19.6)     | 62 (10.5)     | 3 (0.5)        | 78 (13.2)      | 69 (11.7)      |
| I use this site to post about what I do (i.e. going out to eat or to the gym). | 578 (57.7)| 423 (42.3)   | 236 (29.2)     | 24 (3.0)      | 6 (0.7)        | 188 (23.3)     | 46 (5.7)      | 6 (0.7)        | 214 (26.5)     | (1) 10.8       |
Table 4. Student’s Actual Physical Activity and their Likelihood to Post about Physical Activity on social media

| Item                                             | I use this site to post about my physical activity habits/likes | t*   | M (SD)          | P         |
|--------------------------------------------------|---------------------------------------------------------------|------|----------------|-----------|
| Vigorous physical activity                       | Use it                                                        | -2.62| 1.44 (6.16)    | 0.009     |
|                                                  | Not use                                                       | .74  | (1.11)         |           |
| Moderate physical activity                       | Use it                                                        | -4.14| 1.05 (1.41)    | 0.000     |
|                                                  | Not use                                                       | .70  | (1.26)         |           |
| Walking for at least 10 minutes at a time        | Use it                                                        | -1.00| 2.05 (1.85)    | 0.31      |
|                                                  | Not use                                                       | 1.94 | (1.77)         |           |
| Sit and watch TV or movies                       | Use it                                                        | -1.42| 2.51 (2.47)    | 0.15      |
|                                                  | Not use                                                       | 2.28 | (2.49)         |           |
| Use a computer or other electronic device        | Use it                                                        | -3.39| 4.62 (3.79)    | 0.69      |
|                                                  | Not use                                                       | 4.53 | (3.61)         |           |
| Spend time on social media (such as Facebook,   | Use it                                                        | -1.27| 4.95 (3.49)    | 0.20      |
| Twitter, Pinterest, YouTube, etc.                | Not use                                                       | 4.67 | (3.41)         |           |

*t = independent sample T-test, M = mean, SD = standard deviation.

6. Discussion

This study showed that Facebook, YouTube, and WhatsApp are the most common social media sites used by students, and students most often used Snapchat and Facebook to post about their dietary habits and physical activity. Similar results were reported by previous studies (Duggan et al. (2015, 2013). Facebook, YouTube, WhatsApp, and Snapchat have unique features that make these sites the most popular among students. For example, Facebook allows users to mention friends and tag them in food or physical activity posts and is more accessible and easier to use than other sites. YouTube, which can be accessed via laptop, tablet, or mobile phone, also provides search-related recommendations, and highlights the most trending videos, and to watch videos privately and anonymously and allows users to like, share, comment on, and upload videos (Zhou et al., 2010). Snapchat offers many services that make it a popular platform among students, as it is a simple method of sharing everyday moments. Unlike other sites, Snapchat messages disappear after they are opened.

Further, the platform allows users to connect with and follow friends and offers games, news, entertainment, and genuinely innovative photo- and video-editing tools (Elgersma, 2018). These sites offer free access to all users and allow users to create an account, pages, and groups for free. Users can also search for and follow pages related to any topic they choose (Kamel Boulos et al., 2016). Therefore, certain features of these social media platforms make them easy to use and allow users to discuss and share topics related to their lifestyles and health-related behaviors (Hill, 2013).

Students who reported posting about their physical activity on social media sites were also more physically active. Social media has a positive impact on enhancing physical activity, such as improving moderate-intensity walking (Abioye et al., 2013). A recent study found that support from friends through social media allowed people participating in weigh-management programs to better adhere to these programs (Jane et al., 2018). In terms of achieving health-related goals,
### Table 5. Student’s perception of their physical activity and their likelihood to post about physical activity and fitness goals on social media

| Item                                                                 | Category                     | I use this site to post about my physical activity habits/likes | Use N (%) | Not use N (%) | χ² | P     | I use this site to post about my fitness goals | Use N (%) | Not use N (%) | χ² | P     |
|---------------------------------------------------------------------|------------------------------|---------------------------------------------------------------|-----------|---------------|----|------|------------------------------------------------|-----------|---------------|----|------|
| Physical activity compared with most men/women your age             | More active                  | 100 (44.8)                                                    | 123 (55.2)|               | 19.19 | .000 | 150 (67.3)                                     | 73 (32.7) |               | 11.59 | .003 |
|                                                                     | Less active                  | 180 (64.1)                                                    | 101 (35.9)|               |       |      | 226 (80.4)                                     | 55 (19.6) |               |       |      |
|                                                                     | About the same               | 263 (52.9)                                                    | 234 (47.1)|               |       |      | 361 (72.6)                                     | 136 (27.4) |               |       |      |
| How do you describe your current health                             | Excellent                    | 100 (50.5)                                                    | 98 (49.5) |               | 6.89 | .032 | 139 (70.2)                                     | 59 (29.8) |               | 3.14 | .208 |
|                                                                     | Very good/good               | 345 (53.2)                                                    | 304 (46.8)|               |       |      | 477 (73.5)                                     | 172 (26.5) |               |       |      |
|                                                                     | Fair/poor                    | 98 (63.6)                                                     | 56 (36.4) |               |       |      | 121 (78.6)                                     | 33 (21.4)  |               |       |      |
| Physical activity plays an important role in my overall health      | Agree                        | 488 (53.2)                                                    | 429 (46.8)|               | 4.66 | .031 | 666 (72.6)                                     | 251 (27.4) |               | 5.60 | .018 |
|                                                                     | Disagree                     | 55 (65.5)                                                     | 29 (34.5) |               |       |      | 71 (84.5)                                      | 13 (15.5)  |               |       |      |

*χ² = chi-square test, p = p-value.
Table 6. Student perception of diet and their likelihood to post about food habits or likes

| Item                                           | Category          | I post about my food habits or likes | \( \chi^2 \) | \( p \) |
|------------------------------------------------|-------------------|-------------------------------------|--------------|--------|
|                                                |                   | Not use N (%) | Use N (%) |     |       |
| Diet plays an important role in my overall health | Agree             | 400 (91.1) | 508 (90.4) | 0.15 | .695  |
|                                                | Disagree          | 39 (8.9)   | 54 (9.6)   |     |       |
| How healthy do you consider your overall diet  | Excellent         | 35 (8)     | 35 (6.2)   | 3.18 | .203  |
|                                                | Very good/ good   | 232 (52.8) | 327 (58.2) |     |       |
|                                                | Fair/poor         | 172 (39.2) | 200 (35.6) |     |       |
| Compared with most men/women your age, would you say that you eat | More healthy | 112 (25.5) | 126 (22.4) | 2.60 | .272  |
|                                                | Less healthy      | 115 (26.2%)| 171 (40.4%)|     |       |
|                                                | About the same    | 212 (48.3%)| 265 (47.2%)|     |       |

* \( \chi^2 \) = chi-square, \( p \) = p-value.

students use social media to share their goals with friends, document their achievements, and receive positive feedback from other users (Klassen et al., 2018).

Many studies have provided evidence for the relationship between social media use and physical activity (Abioye et al., 2013; Hill, 2013; Laranjo et al., 2014; Santtila et al., 2016). The socio-ecological model explains that factors influencing students' physical activity are individuals' beliefs, social support, and culture (Liu & Young, 2018). At the interpersonal level, online wellness groups play a significant role in supporting individuals and encouraging them to achieve their physical activity goals (King & Gonzalez, 2018). Moreover, this supports the hypothesis that individuals who are more physically active may belong to social networks that are more physically active (Liu & Young, 2018). Therefore, the availability of different health-related accounts and groups on social media sites and interacting with these groups may encourage students to be more physically active.

Our study results showed no significant association between students posting about their dietary habits and weight on social media sites and their perceptions about their dietary habits and weight. Previous studies (Hill, 2013; Klassen et al., 2018; Vaterlaus et al., 2015) found that social media sites were the least effective intervention for enhancing students' nutrition and that students' food choices were not affected by their likelihood of posting about their dietary habits on social media. It has been known that social media platforms allow students to interact with their friends and inform others about their food choices through restaurant reviews, pictures, and posts, hence allowing users to influence each other's food choices (Vaterlaus et al., 2015). In many cases, this influence can be harmful and may promote the consumption of unhealthy foods. Moreover, pseudo professionals, celebrities, and popular accounts may use social media to share inaccurate and unreliable health-related information, therefore negatively influencing the health behaviors of many individuals (Vaterlaus et al., 2015). To attract students to social media and positively influence their health behaviors, health-related Facebook pages should be well-designed, visually attractive, and available in the targeted students' languages (Klassen et al., 2018).

7. Limitations
This study offers valuable information about the impact of social media use on students' physical activity and dietary habits, perceptions, and behaviors. Although this study had a large sample, it
was limited to students from four universities, limiting the generalizability of the results to other settings in other areas. Further, using a self-reported questionnaire may have led to response bias, especially regarding the students’ perceptions of their diet, weight, and physical activity.

8. Conclusion

To our knowledge, this is the first study in Jordan to assess university students’ behaviors and perceptions regarding the impact of social media on their dietary habits and physical activity. The results of this study indicate that university students in their everyday life widely use social media, and many students rely on these sites as a source of information related to health, diet, and physical activity. Students Union and the deanship of students’ affairs can use social media sites available on the campus to disseminate health-related messages regularly to promote their healthy practices, including a healthy diet and physical activity. They can develop counseling programs that can be implemented for free using different social media sites to activate the role of social media in health promotion among university students. Furthermore, faculty members can promote the benefits of using social media sites to enhance the lifestyle behaviors of students through different classes and courses.

Funding
This research was supported by [Grant Number 527-2018], Jordan University of Science and technology, dean-ship of research.

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Disclosure statement
No potential conflict of interest was reported by the author(s).

Citation information
Cite this article as: Social media use among university students in Jordan and its impact on their dietary habits and physical activity, Nahla M. Al Ali, Esra’a Alkhateeb, Diana Jaradat & Mohammad Bashtawi, Cogent Education (2021), 8: 1993519.

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