



A Baseline Survey

The Use of Social Media and its Influence on Palestinian Adolescents' Health Behaviors and Well-being

This report provides evidence on the ways in which Palestinian adolescents engage with health-related content on social media, and how this impacts their health-related understandings and behaviours.

Special thanks and appreciation to team who worked on designing and implementing this study.

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IMPORTANT DEFINITIONS USED IN THE STUDY

Social Media: a computer-based interactive technology that facilitates the sharing of ideas, thoughts, and information through the building of virtual networks and communities.

Social media Platforms: A social media-related service, application or platform that can be used with through an application or the internet (ex. Facebook, Instagram, Twitter, Whatsapp, Youtube, Snapchat, Tiktok).

Cyber bullying: "willfull and repeated harm inflicted through the use of computers, cell phones and other electronic devices". Harmful bullying through electronic devices can include posting rumor, threats, sexual remarks, a victim's personal information or labelling people.

Mental stressors: Situations that are experienced as a perceived threat to one's well-being or position in life, especially if the challenge of dealing with it exceeds a person's perceived available resources.

Sexual Harassment: an unwelcome behavior of sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature. Some of this behavior has been continuously occurring through social media platforms.

Inappropriate content: inaccurate information or images that are upsetting and disturbing to see, and that could lead into unlawful or dangerous behavior. In this study, we referred to inappropriate content as disturbing content related to health such as dieting, nutrition, exercise, body image, smoking, alcohol, sexual health.

BACKGROUND

Social media has become a common international trend which has spread its reach to almost every country around the world. Among the prominent users of the social media are students. Over the past few years, social media use has dramatically risen among adolescents with research suggesting a 1000% increase in use from 2005 to 2013 (1), making it the most popular activity among today's adolescents (2). According to Pew Research Center, 73% of adolescents have smartphones: 76% of those adolescents being 15–17 years old and 68% being 13–14 years old, which allows easy access to the Internet, streaming TV/videos, and interactive "apps." Statistics show 76% of all adolescents use social media, more than any other age group (2, 3), with the same percentage using at least 1 social media site. Although Facebook remains the most popular social media site, adolescents do not typically commit to just 1 social media platform; more than 70% maintain a "social media portfolio" of several selected sites, including Facebook, Twitter, and Instagram (1, 2). In addition, a recent poll found, 22% of teenagers log on to their favorite social media site more than 10 times a day, and more than half of adolescents log on to a social media site more than once a day (4) (5). This illustrates, a large part of this generation's social and emotional development is occurring while on the internet and on cell phones.

Adolescence is the transition from being a dependent child to an independent adult. Extending from the onset of puberty until the completion of brain development, it is a time of great vulnerability and opportunity for adolescents. The health-related behaviors and conditions of most non-communicable diseases tobacco and alcohol use, diet and exercise habits, and increased weight, often begin in adolescence (6). Because of their limited capacity for self-regulation, vulnerability and susceptibility to peer pressure, children and adolescents are at some risk as they navigate and use social media. If there is no guidance, care, and follow-up from the adolescent's family and his/her school, the adolescent, in his quest to develop a sense of social identity, spends most of his time thinking, reviewing, and reflecting on the general values and behaviors he observes on social media. Additionally, research indicates that major concerns have arised as there have been frequent problems associated with social media use including cyberbullying, privacy issues, and sexual harassment. Other problems that merit awareness include internet addiction and sleep deprivation (7). Adolescents are gravitating toward social media and integrating it into critical aspects of their identities, leading to growing concerns of the potential negative effects and risks social media has on this extremely vulnerable population.

Social media sites and mobile apps provide platforms for users to create an online identity, communicate with others, and build social networks. Worldwide, there is a general understanding that there are advantages for adolescents using social media, however, there are also some major risks. Some of the main benefits continuously mentioned for social media use among adolescents include: 1) the opportunity to connect with friends, family, and colleagues who share the same interests, and share pictures, ideas, and fun moments with each other, 2) exposure to new ideas and knowledge acquisition, 3) new opportunities to access health-promotion messages and information, 4) provides efficient ways for education and 5) staying updated and keeping informed with the latest news (8). One of the major risks of social media use is threats, cyberbullying and harassment through the use of social media (8).

This is one of the biggest risks of using the internet for adolescents as it can cause profound social and psychological consequences such as depression, anxiety, isolation, and tragic suicide (9). Other risks include negative health effects on weight and sleep; exposure to inaccurate, inappropriate, or unsafe content and contacts; compromised privacy and confidentiality (8) and sending or receiving inappropriate messages of private images. This phenomenon can be seen in recent research which has shown that 20% of adolescents published pictures of themselves showing their bodies off on social media (9).

A study conducted on adolescents in England over three years starting in 2013 found that social media itself does not cause harm, however, frequent use may disrupt activities that have a positive impact on mental health such as sleeping and exercising, and also increase exposure of young people to harmful content, particularly, cyberbullying. The study also revealed frequent users of social media reported high levels of psychological distress, lower life satisfaction, happiness and greater anxiety. Researchers found that cyberbullying and reduced sleep and physical activity play a significant role in explaining these findings (10). Extensive research has also shown that the use of these web-based platforms is associated with mental health problems, such as depressive symptoms and suicidal behaviors (11, 12).

Another study conducted on both middle and high school students found that heavy social media use is negatively associated with school connectedness and academic performance (13). This study and other similar studies which found the same results concluded that adolescents should limit their social media use to no more than two hours per day (13, 14). Elsewhere, researchers found a significant association between the use of social media and unhealthy eating behaviors and weight gain among adolescents (15). These behaviors are essential for the health and well-being of adolescents as unhealthy eating behaviors such as breakfast skipping and consumption of sugar-sweetened beverages (SSB) have been associated with obesity and other chronic diseases (16), which could be detrimental for adolescents once they are adults.

In the context of Palestine, children, adolescents and youth (17) below 29 years make over two thirds of the Palestinian population. Particularly, adolescents (10-19 years old) constitute 30% of the entire population in Palestine (18). According to statistics by The Arab Center for the Advancement of Social Media, 76% of Palestinian youth use access internet via smartphone for of 5.5 hours per day (19). According to the Palestine Central Bureau Statistics (PCBS) (2016), recent statistics indicate that Palestinian youth are one of the largest users of social media in the Arab World, with the majority using mainly Facebook, followed by Instagram (20).

It has been previously established in recent studies conducted in Palestine, that adolescents are spending too many hours on social media everyday, using social media the most in the evenings and before they sleep, leading to decreased hours of sleep. It was reported this ultimately hindered their academic achievement (21). Another study found that social media had a major influence on adolescents and youth use of drugs, tobacco and alcohol (22).

This study comes in light of a growing concern of increased rates of adolescents owning mobiles and using social media platforms in Palestine, both in West Bank and Gaza Strip. The extensive amount of hours Palestinian adolescents' are spending on social media has led to the belief that adolescents have become addicts to social media. The study stems from previous research conducted around the country, which found social media has had a negative impact on adolescents health and wellbeing as well as several round table discussions conducted in Palestine on social media use among adolescents.

The study sheds light on the recommendations which were made previously to investigate further the positive and negative effects of social media use among adolescents, and examine what type of information adolescents are accessing from social media platforms and where are they accessing their information from. It is worth mentioning, that this study was conducted in the midst of the COVID-19 pandemic, when Palestine was under lockdown. With that said, the COVID-19 pandemic has limited in-person social interactions presenting major challenges for adolescents. There is no surprise that the COVID-19 crisis and lockdown has also drastically increased adolescents' use of social media. With the continuous restrictive measures placed on Palestinians during the recent months, children and adolescents were forced to stay at home, minimizing their extracurricular activities and leaving them with no other option than spending their time on social media. Especially for adolescents, who highly rely on social contacts with peers, the prolonged period of social isolation may have had detrimental effects on their mental health, as well as on their physical health. Evidence suggests that adolescents' are turning to social media for health-related information. It is recognized social media use has both positive and negative influences on adolescents' health behaviors and wellbeing. Social media use continues to provide valuable potential and promise to better promote health among adolescents, however, there are important challenges that must be considered and appropriately addressed to maximize its utility as a health promotion tool. The question whether social media use benefits or undermines adolescents' well-being is an important societal concern. Currently there is a poor understanding of how to 'position' young people in the social media-health nexus, and there is a tendency to focus mainly on risk and negative outcomes of use. As social media is the most prominent communication tool of choice for adolescents, it is important to understand the relationship between the frequency of social media use and health behaviors among this population and whether/how interventions can be effective (23) (24). In addition, while social media sites have become popular platforms for social interactions and can be considered a novel setting for health promotion, it remains unclear how social media can be used to promote teen health (25).

There are few studies in Palestine which have investigated the effects of social media on health behaviors, especially among adolescents'. No robust guidance on adolescents' health-related uses of social media is available for researchers, practitioners or clinicians (26). There is also little information on health and social media in school/ childcare guidelines in country policies around the world (27), including Palestine. Additionally, there is a clear gap in research in our understanding of the relationship between young people, social media and health, and the effects. This has raised questions about the relationship between the increasing use of social media by children and adolescents and its effects on their health and wellbeing. In light of this, Juzoor for Health and Social Development, in collaboration with the Palestine Ministry of Education conducted this study to examine the effects of social media on adolescent health-related behaviors and wellbeing. These findings will ultimately help in enhancing the importance of developing reliable social media content tailored to the health awareness among youth.

The data collected in this survey will help INFORM
THE DEVELOPMENT OF
GUIDELINES TO SUPPORT
PARENTS, PRACTITIONERS IN
EDUCATION AND HEALTH, AS
WELL AS POLICY-MAKERS AND
RESEARCHERS.

In addition, the findings will help to INFORM THE EDUCATION SYSTEM WHEN DEVELOPING CURRICULUM FOR ADOLESCENTS INCLUDING FORMULATING STRATEGIES FOR SOCIAL MEDIA USE.

OBJECTIVES

The main objective of this survey is to explore the role and impact of social media use on adolescent health behaviors and well-being. Specific objectives include:

- 1. To assess what type of information adolescents are getting from social media platforms and from where are they accessing their information.
- 2. To assess the positive and negative effects of the social media platforms on adolescent behaviors and health.
- 3. To examine the association between the frequency of social media use and dietary habits, physical activity, sleep adequacy and mental stressors.

SAMPLE AND DATA COLLECTION

This survey was conducted on adolescents attending public and private high schools in 24 directorates in the occupied Palestine territories (oPt) (West Bank and Gaza) between March and April, 2021, in which Palestine was under lockdown and schools were closed, due to the COVID-19 Pandemic. The sample includes participants from cities, villages and camps from each one of the directorates. The West Bank directorates include Hebron, North Hebron, South Hebron, Bethlehem, Ramallah/Al-Bireh, East Jerusalem, Jerusalem Suburbs, Jericho, Nablus, South Nablus, Tulkarem, Jenin, Qalqilya, Tubas, Yata, and Qaabatyah and the Gaza directorates include North Gaza, Central Gaza, Gaza, East Gaza, East Khan Younis, Khan Younis, Rafah, and Deir Al Balah. The sample size calculation was conducted by The Palestine Central Bureau of Statistics, which was based on the number of schools in each directorate, population size of students enrolled in Grade 8 until Grade 12 registered in the school year 2020/2021, a confidence interval of 95% and a margin error or 7%.

The sampling method used in the study was a multistage stratified random sampling procedure, performed to select the participants attending grades 8-12 in both government and private schools across the oPt. At the first stage, each governorate in the oPt was divided into directorates (1-2 directorates in each governorate). Then, the schools were selected proportionally from each directorate. The schools were grouped into boys and girls as well as mixed primary and secondary schools. At the second stage, classes were selected from each grade (8-12) using a simple random method. Therefore, the number of adolescents selected varied, based on the number of students in each class and the number of selected schools, which in turn depended on the total primary or secondary school population in each directorate.

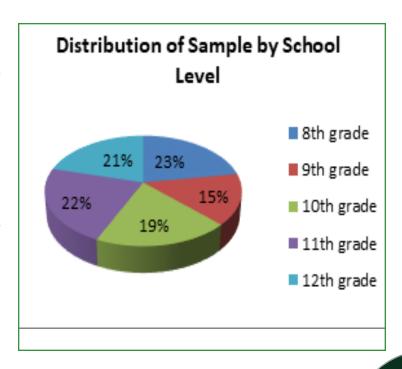
For data collection, a link to an online structured questionnaire was distributed to adolescents through school platforms by school staff to each directorate. The structured questionnaire assessed the following areas: (1) socio-demographic factors (sex, age, residence, grade, governorate, i.e.), (2) social media use (type of social media use, average number of times social media is accessed on a daily basis), (3) mode of device used (phone, computer, tablet), (4) information-seeking behaviors and types of information retrieved from social media platforms, (5) interests and activities (types of participation on social media sites), (6) exploration of health information, (7) identification of reliable sources for health information, and (8) adolescent health including diet and nutrition, sleep, physical activity, self-esteem, psychosocial health and smoking. Answers for questions related to social media use were constructed using specific scales such as "Extremely", "A lot", "a little bit", "very little", "not at all" OR "A lot", "moderately", "a little bit", or "not at all".

The initial questionnaire was constructed, discussed, adapted and approved by the research study team and steering committee at Juzoor for Health and Social Development and the Palestine Ministry of Education. The construct of the study questionnaire was based on an extensive literature review of studies conducted on the same topic, in which previously used questionnaires were culturally adapted to the Palestinian context and the Arabic language. The questionnaire was translated from English to Arabic and back-translated to ensure accuracy of the questions in both languages.

As the study was conducted on school students, approval was obtained from the Palestine Ministry of Education, upon beginning study. The study proposal was also reviewed and approved by the Helsinki Ethics Committee of the Palestinian Health Research Council in the Gaza Strip. Electronic informed consent was obtained from each participating adolescent as well as his/her parent/guardian, after receiving information on the study objectives, confidentiality and its benefits/risks.

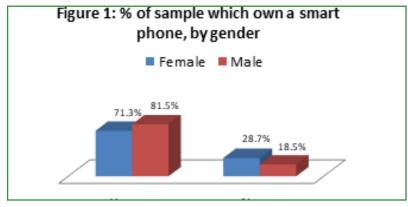
SAMPLE CHARACTERISTICS AND SOCIO-DEMOGRAPHIC INFORMATION

A total of N=5134 adolescents between the ages of 13-18 years old were virtually surveyed between March and April, 2021. Among the 5134 adolescents, 61.5% were females and 38.5% were males. Approximately 38.2% of the sample are adolescents between 13-15 years old (young adolescents) and 61.8% are between 16-18 years old (older adolescents). Data was collected from adolescents residing in all governments across the oPt in which 78.6% were living in the West Bank and 21.4% in the Gaza Strip. Among the sample, 39.0% of respondents were from cities; 47.4% from villages and 13.6% from camps.



KEY FINDINGS

Screen time among sample during the lockdown



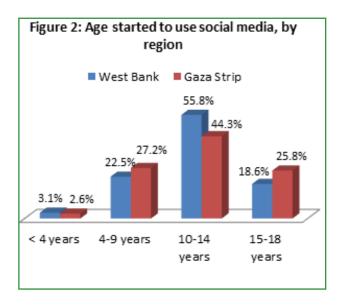
- 75.2% of the sample reported owning a smart phone.
- Older adolescents (16-18 years old) were more likely to own a smartphone than younger adolescents (13-15 years old).
- There were no major differences among adolescents living in West Bank vs Gaza Strip for owning a smartphone, with an equal proportion of Gaza Strip residents owning a smart phone as West Bank residents.
- Among those who do not own a smart phone, 79.6% use either their mother or father's smart phone.
- 50.5% of respondents reported owning a computer, laptop, or tablet.
 - Among those who do not own a device, 59.0% use either their mother or father's device.
- 63.5% of respondents reported always having access to internet, while 7.7% reported rarely having access and 1.9% reported not having any access at all.

It is evident ALL adolescents' in our sample have some kind of access to either a smartphone, or any other electronic device, either by owning a smartphone OR using one of their family member's.



Social Media Use

- Approximately 80% of adolescents starting using social media below 14 years of age and almost 26% of adolescents started using social media when they were children (9 years and under) (Figure 2).
- Males reported starting to use social media at younger ages (9 years and under) than females (32.1% vs 22.9%).

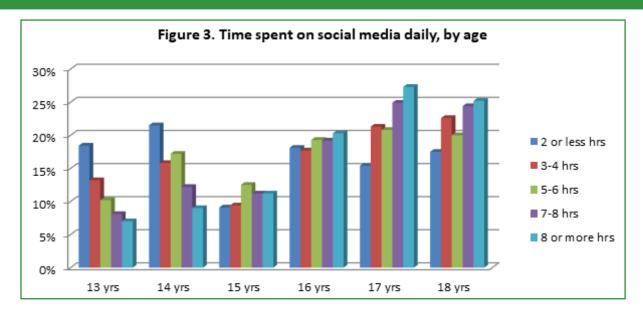


Adolescents started to use social media at very young ages, which could be attributed to the increasing rates in social media reported.

A larger percentage of males reported owning a smart phone, which could be attributed to cultural reasons, and explain why males started using social media at younger ages than females.

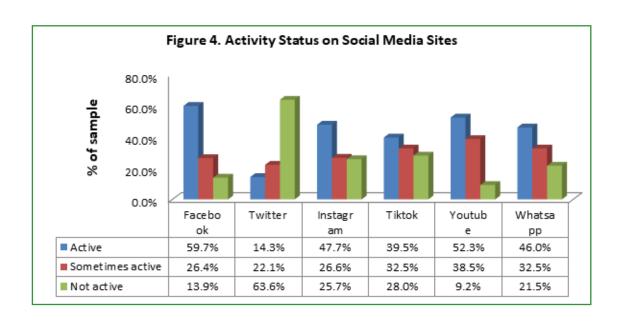
1. Time Spent

- Over 52% of adolescents reported spending between 3 to 6 hours per day on social media; while approximately 28.9% reported spending 7 or more hours on social media per day.
- Older adolescents (16 and 18 years old) were more likely to spend 7 or more hours on social media platforms than younger adolescents (13 and 14 years old), which were more likely to report spending 2 hours or less on social media daily (Figure 3).
- Females were likely to spend more hours on social media daily than males.
- Participants living in Gaza Strip reported more use of social media than those living in the West Bank.
- Participants who owned a smartphone were more likely to spend more hours on social media daily than those who did not own a smartphone; while participants, which reported not owning a smart phone were more likely to spend less than two hours on social media daily.
- 59.8% of adolescent which reported owning a computer, laptop, or tablet spent 8 or more hours on social media daily, while 62.0% who reported not owning a device spent less than 2 hours daily on social media.
- 51% of adolescents stated there was no specific time during the day they were using social media; approximately, 26% reported using social media in the evening.

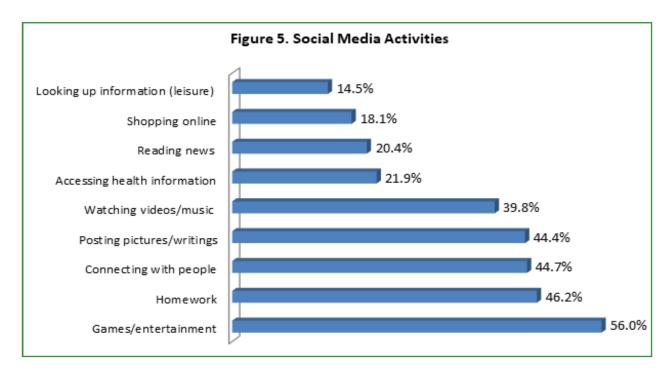


2. Activity on Social Media Sites

- Social media platforms which had the most reported activity included Facebook, YouTube, Instagram and WhatsApp (Figure 4).
- Among the total sample, 15.6% use one social media site, 10.6% use two and 73.8% use three or more social media sites.
- Although activity of social media sites were similarly prevalent among males and females, females were more likely to use Facebook, Instagram and Twitter.
- Over 60% of participants among all age groups reported they were not active on twitter, while it was confirmed that older adolescents were more likely to be active on Facebook and Instagram.



3. Adolescents' general experiences on social media sites



- When asked what participants use social media for, the most commonly reported responses were playing games (56.0%), doing homework (46.2%), connecting with people (44.7%) and posting pictures (44.4%).
- When asked which social media platforms were used the most to obtain general information on a scale of 1-9, the majority of the sample responded Youtube, Facebook and Instagram. The least reportedly used platforms to obtain general information were Twitter and blogs.
- Adolescents living in the West Bank were more likely to use social media for connecting with family and friends, reading news, shopping online, homework and looking for general information more than participants living in Gaza Strip.
- emales more frequently reported connecting with friends, conducting homework, shopping online, looking for information and reading news on social media platforms than males.
- The high percentage of adolescents using social media for homework could be overestimated, as this study was conducted during COVID-19 lockdowns, and many teens were doing homework together using their social media accounts.
 - As 56% of our sample reported using social media to play games and for entertainment, we propose to start promoting health-related behaviors and information through social media games.



Obtaining Health Information on Social Media Sites

1. Frequency of social media use for health-related information

- Among the 21% who reported seeking health-related information, 51.9% say they obtain a lot of health-related information from social media; while 8.9% say they don't obtain any information at all.
- Frequency of obtaining health-related information from social media was much more common among females than males as well as older adolescents.

West Bank adolescents were more likely to obtain health information from social media sites than those in the Gaza Strip.

- Among those that obtain health-related information from social media sites, 42.9% retrieve information from Facebook, 51.3% from YouTube and 25.1% from Instagram.
- The internet such as Google, Wikipedia, Medscape and others was used by 51.7% of the sample to retrieve health information. Twitter was not common at all to retrieve health information.
- Increased hours of social media use was associated with an increase in access to health information.
- Over 90% of the sample reported they trust the information they get from social media.
- Approximately 48% say the health-related information they get from social media is "very useful"; while 5.9% say its "not at all".
- Among those that obtain a lot of health information from social media sites; over 60% reported they trust that the information they are obtaining is reliable and is very useful.
- 55.9% reported they do not observe inappropriate content related to their health on social media; while 9.5% report observing a lot of inappropriate health-related content.

Benefits of information obtained from social media:

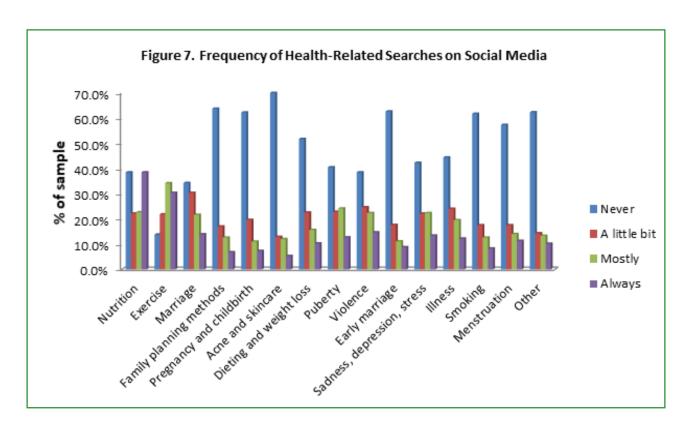
- 46.9% of adolescents say social media helps them live a healthy life a lot while 11.9% say it does not at all.
- 49% of teens reported social media has helped them a lot to deal with health-related problems.
- 75.6% of adolescents stated social media has helped "moderately" in their commitment to follow COVID-19 measures and restrictions; while 8.3% stated it has not at all.
- 75.8% of the sample said social media had helped "a lot" in their understanding of how to prevent getting infected with COVID-19.

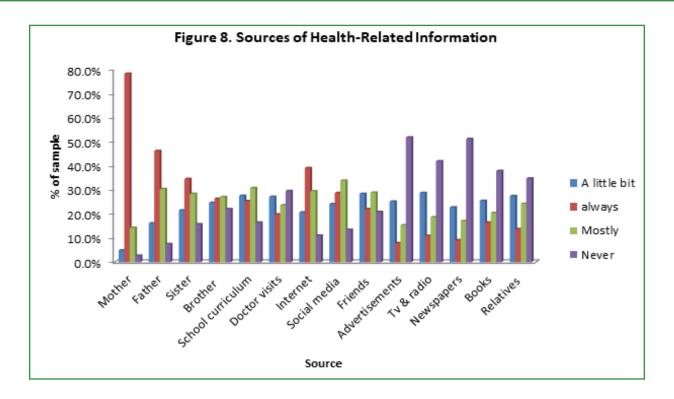
High-frequency users (7+ hours on social media) were more likely to report accessing health-related information on social media than low frequency users.

Facebook, Instagram, and Youtube were the most commonly used social media sites. Those who were always active on these sites, were more likely to report accessing a lot of health-related information. This opens a window for using social media to impact health behaviors. However it also leaves barriers in accessing quality and reliable health information from other sources. Therefore, more efforts are needed to guide youth to credible sources of information.

2. Most Searched Health-Related Topics

- The two most common and frequently searched topics on social media sites by adolescents were nutrition (61%) and exercise (64.4%) (Figure 7).
- Over 60% of the sample reported never obtaining health-related information on skincare and acne, early marriage, pregnancy, smoking or menstruation.
- Female participants were much more likely to report researching topics such as acne and skin care, diet types, family planning, illnesses, menstruation, pregnancy and sadness and depression than male participants, difference which approached statistical significance.
- In contrast, males were more frequently researching topics such as puberty, smoking and violence than females.
- When asked where adolescents get most of their health-related information over 75% responded "always" from their mother; 39% responded always from the internet (eg. Google, Wikipedia, Medscape, etc) and 29% from social media sites (Figure 8).
- · As there is high number of sample is accessing moms for health we need to educate moms.







Possible effects of social media use on adolescent health and well-being

1. Social Media Use and Behavioral Changes among Adolescents

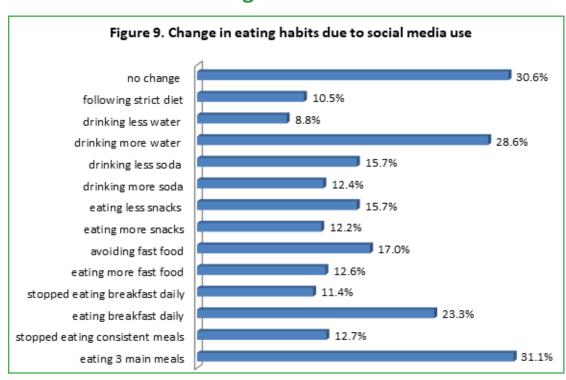
- When asked if respondents changed their overall behavior as a result of social media, over 70% reported they have changed their normal behaviors as a result of social media
- Older adolescents were more likely to report changes in their behavior than younger adolescents.
- 44.7% say social media has not encouraged them to increase their physical activity; 26.8% reported it has encouraged them a lot to increase their physical activity.
- 19.0% reported they conduct physical exercises they see on social media a little bit, while 12.5% reported they conduct physical exercises they see on social media a lot.
- 23.2% reported they made a lot of positive changes to their eating habits as a result of information they found on social media; while 34.1% reported they did not at all.
- 11.4% stated social media has extremely affected their desire to lose weight; while 36.7% reported it did not at all.
- 17.5% reported social media influenced them to gain a lot of weight
- 14.7% reported social media influenced them to lose weight; while almost 48% stated it did not influence their weight to change at all.

FEMALES WERE MORE
LIKELY TO MAKE
POSITIVE CHANGES TO
THEIR EATING HABITS
AND INCREASE THEIR
PHYSICAL ACTIVITY THAN
MALES AS A RESULT OF
SOCIAL MEDIA.

2. Social Media Use and Negative behaviors

- Approximately 20% of adolescents reported developing compulsive exercise behaviors such as obsessive amount of exercising and weight lifting, exercising during inappropriate times, or exercising despite having an injury.
- 20% of the sample reported social media has led them to start comparing themselves to others. Additionally, 20% also reported social media has influenced their satisfaction with their body shape in a negative way.
- 27.6% of adolescents reported a change in eating behavior such as excessive weight loss or binge eating
- 3.4% of the sample reported social media has led them to drink alcohol, 11.8% to start smoking and 3.1% to start taking drugs.
- Over 45% reported social media has had no effect on the development of negative behaviors.
- Approximately 12% of adolescents developed negative eating behaviors from use of social media including drinking more soda, eating more snacks and eating more fast food.
- In contrast, 31.1% started to eat 3 main meals every day and 28.6% started drinking more water; however, 30.6% reported social media use has had no effect on their eating behaviors.
- 33.2% reported their sleep has become worse as a result of social media.; 55.4% stated their sleep did not change at all
- 22.5% reported using social media late at night hinders them from waking up early and starting their day energetically.
- Females were more likely to change their dietary and physical activity behaviors than males.
- 27.4% of the sample reported they have smoked cigarettes or shisha in the last month.
- Among those who smoke, 10.8% reported social media has played a big influence in their decision to quit, while 19.4% stated social media had no influence at all.

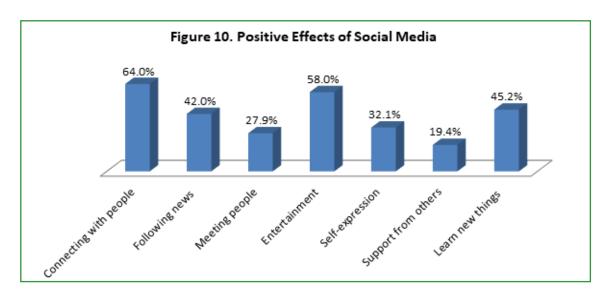
Increased social media use was associated with poorer sleep patterns among Females



A large proportion of the sample report using social media in the evenings and before they sleep, which could partially explain why a significant proportion of the sample also reported their sleep patterns have gotten worse.

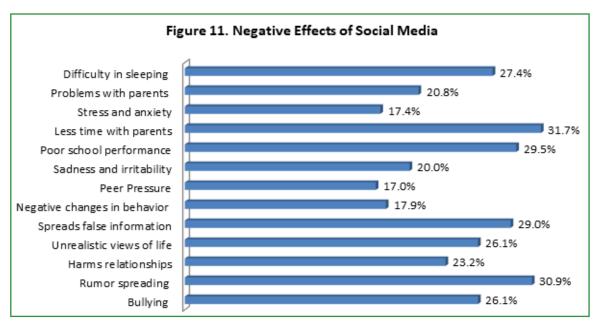
Positive effects of Social Media on Adolescents

• When asked how social media affects them positively, 64% reported it helps to connect them with friends and family; 58% reported social media provides them entertainment (Figure 10).



Negative effects of Social Media on Adolescents

• Rumor spreading, spreading false information, poor school performance, less time with parents and difficulty in sleeping were the most frequently reported negative effects of social media by adolescents (Figure 11).



3. Social Media Use and Mental health

- 41.3% of participants reported social media helps them cope with mental stressors that they experience
 in life, while 24.8% reported it does not at all. In contrast 5.2% reported it social media increases their
 mental stressors.
- Adolescents, which spend 7 or more hours on social media were more likely to report social media helps them to cope with their mental stressors.
- Females were more likely to report that social media increases their mental stressors than males.
- Among the total sample West Bank adolescents were more likely to report that social media use helps to cope with mental stressors. More specifically, among adolescents only in Gaza, 43.6% reported that social media use helps them a lot to cope with mental stressors.
- 75.6% of the sample stated they always have self confidence and self-esteem.
- 89.5% of adolescents reported they feel happy about their appearance.
- 38.0% of participants say social media brings them a peace of mind, while 18.8% reported its not related to their peace of mind at all.

4. Exposure to cyber bullying and harassment on social media platforms

- Females reported being exposed to some sort of bullying a lot more often than males.
- Adolescents from the West Bank were more likely to be exposed to cyberbullying than those in Gaza.
- 62.9% of adolescents said they do not know anyone who has been exposed to sexual harassment on social media; however 12.7% said they know a large number of people who have been exposed to sexual harassment on social media.
- 65.2% reported "never" receiving inappropriate emails or messages from classmates on social media; 5.2% reported they have have received "a lot".
- Almost 70% of adolescents reported their friends have never posted something inappropriate about them on social media;
 4.3% reported their friends have posted a lot of inappropriate information about them on social media.
- 71% reported they have never sent inappropriate messages or posted something bad about their friends on social media; while 4.0% reported they did a lot.

15.8% reported "a lot" of exposure to cyber bullying on social media.
13.8% of adolescents reported they have bullied someone on social media a lot; 57.7% have never bullied someone on social media.

CONCLUSIONS

This study explored the influence of social media on health behaviors among adolescents in the West Bank and Gaza, including dietary habits, physical activity, sleeping patterns, cyberbullying, and psychosocial and mental wellbeing. We also examined how frequently adolescents use social media, which social media sites they most frequently use, which sites they use to access health-related information, how much adolescents trust the health-related information they obtain from social media, and what are the positive and negative effects of social media use among these adolescents.

This current study found that almost all our sample either owns a smartphone or has access to a smartphone; 80% of the sample started using social media before 14 years of age and over 55% of our sample spends 5 or more hours on social media every day. This reveals, a large part of this generation's social and emotional development is occurring while on social media, which is raising some concern, in regards to the time spent on social media, and the potential negative health effects and general effects this could have on such a vulnerable population. On the other hand, as social media use increases, especially among our adolescent population, it continues to provide valuable potential and promise to better promote health among adolescents. In the case of this study, almost 90% of our sample reported using social media, although seeking health information was cited by only 21% of adolescents. This study found that although not a core function on social media, a large proportion of our sample relies on social media for accessing healthrelated information more than healthcare providers. Our findings indicate the effect of social media on health behaviors is generally positive especially on nutrition, exercising, health information seeking behavior, smoking cessation, and coping with mental stressors. This underscores the potential for social media as a health promotion tool for teens at least in these areas, where it has been widely recognized that social media may have a positive effect on healthy lifestyle behaviors. As in the case of this study, adolescents tend to be influenced by things they see on social media, including physical activity and exercises, desire to lose weight, and healthy eating habits. In addition, the findings in this study are consistent with Plaisime et al. (2020) and Lenhart et al. (2010), which reported between 30% to 66% of teens use social media to learn about health topics such as dieting, nutrition, and fitness (3).

Other reported positive effects of social media which were reported, were connecting with people, entertainment and learning new things, all of which could improve the wellbeing of our adolescents, if being used in the appropriate way. Furthermore, this study found that there were differences in the strategies used to engage adolescents boys and girls on social media, thus, it is important to consider gender norms, roles, and expectations in crafting effective health messages for teens through social media.

Facebook, Instagram and Youtube were the most commonly used social media sites. Those who were always active on these sites, were more likely to report accessing a lot of health-related information. This opens a window for using these social media platforms to promote positive health behaviors. However it also leaves barriers in accessing quality and reliable health information from other sources. Therefore, more efforts are needed to guide youth to credible sources of information.

Social media's dynamic ability to engage and maintain large audiences, as the case of this study, helps create an incredible potential to increase knowledge and awareness and promote health behavior change related to dietary habits, fitness and physical activity among adolescents. Social media holds promise as an effective health communication tool; however, information must be reliable and composed of attractive messages tailored to meet adolescents' diverse needs. Parental involvement with adolescents' social media use may be more important than ever, and keeping communication channels open can help them establish healthy boundaries with their social media use.

Nevertheless, our study also found that the use of social media does not go without drawbacks such as negative effects on cyberbullying, harassment, poor school performance, and spending time with family. Additionally, our findings show that a large proportion more than a quarter of our sample have poor sleep quality, developed negative eating behaviors, developed compulsive exercise behaviors, and started to compare themselves with others as a result of the extensive use of social media. Therefore more awareness is needed to enhance the optimum use of social media, to better the quality of health-related information provided on social media so this vulnerable population is not negatively affected. Social media can and has easily evolved into a type of addiction for some adolescents. As important as social media has become for adolescents we do not want adolescents to forget other community engagements. The time adolescents spend on social media is in turn taking away from time they could be: spending with family, doing extracurricular activities, studying and school work, as well as physical exercise. Many adolescents' today might seem more content scrolling staying on their phone on social media than actually spending time with family members and friends, but it doesn't mean these behaviors are positive.

Our findings propose additional evaluation to better assess the extent to which social media can be used to improve health communication to adolescents. As there are high rates of social media use among Palestinian adolescents, we need to implement guidelines and recommendations for appropriate social media use to protect this population group. Studies evaluating the impact of health programs including social media based programs on teen knowledge, attitudes, and behaviors are lacking. Therefore, given the lack of information, the findings from this study are indicative of the critical need to further explore how social media platforms can be used to promote health.

RECOMMENDATIONS

EDUCATION SECTOR

- Schools should start using social media as a tool to promote health and communicate health-related information effectively and flexibly.
- ldentify opportunities to teach about reliable sources of information and health advocacy on social media.
- Empower adolescents to understand digital social norms and avoid risky behaviors found on social media.

 Adolescents need to be empowered to engage in critical, safe, and ethical behaviors.
- Ensure that young people are equipped with the skills that they need to navigate and assess what they are seeing on social media.
- Develop policies for social media use among adolescents.
- Develop guidelines and policies to protect adolescents from inappropriate content and limit the amount that reaches them through social media.
- Provide digital literacy support and skills to teachers to help them critically evaluate the relevance and quality of health-related information.
- Integrate psychosocial support as part of guidance/counseling services for students in schools.

PARENTS/GUARDIANS

- Encourage parents to be concerned in limiting adolescents screen time and social media use.
 - Parents need to designate media-free times together (eg, family dinner) and media-free locations (eg, bedrooms) in homes. Promote activities that are likely to facilitate development and health, including positive parenting activities, such as reading, teaching, and talking together.
- Parents need to become aware of the nature of social media sites, given that not all of them are appropriate for children and adolescents.
- Parents need to support young people to use social media safely and appropriately to protect adolescents from development of harmful views and/or behaviors that are linked to their engagement with social media.
- Parents need to promote that adolescents get the recommended amount of daily physical activity (1 hour) and adequate sleep (8–12 hours, depending on age).
 - Recommend that adolescents not sleep with devices in their bedrooms, computers, and smartphones.
- Avoid exposure to devices or screens for 1 hour before bedtime.

HEALTH ORGANIZATIONS

- Develop a social media strategy as part of their overall communication strategy to help achieve health promotion goals.
- Integrate and use social media platforms as a tool to communicate and promote important, useful and adolescent friendly health-related messages through innovative ways (eg. Online games, interactive messages, social media groups etc).
 - Health organizations should explore how best to use social media tools to engage with adolescents, benefitting from the interactive and engagement-oriented features of these tools.
- Provide recommendations on which platforms to use and what types of health-related information to obtain from social media.
- Educate parents about the importance of supervising adolescents' online activities.
 - Work with families and schools to promote understanding of the benefits and risks of media.
 - Help families understand social media sites and to encourage healthy use and urge parents to monitor for potential problems with cyberbullying, "Facebook depression," sexting, and exposure to inappropriate content.
- Inform educators and legislators about research findings so they can develop updated guidelines for safe and productive social media use.

RECOMMENDATIONS AND RESEARCH QUESTIONS FOR POLICY DIALOGUE

- To explore further the risks and benefits of social media on adolescents
- To examine the influence of social media on the health behaviors on a national level among other populations including children, adolescents and adults.
- To explore how and to which extent social media platforms can be used to promote health and improve health communication.
- To evaluate the impact of health programs including social media-based programs on adolescent knowledge, attitudes, and behaviors.
- To determine how best to frame various health topics in the context of issues that will be attractive to adolescents as well as to understand the types of issues that are more likely to mobilize and engage diverse groups of adolescents.

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