Research article

# Identification of the opportunities and threats of using social media among Iranian adolescent girls

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A B S T R A C T

*Background:* The use of the Social Media (SM) has increased dramatically among adolescents. Social media are full of opportunities and threats. The present study aims at identification of opportunities and threats of using social media among Iranian adolescent girls.
*Methods:* This study was conducted using a qualitative approach and content analysis in 2019 in the city of Kermanshah, western Iran. Data were collected through individual semi-structured interviews and focus group discussions with 36 adolescent girls aged 12–18 years who were selected by theoretical and purposive sampling. ATLAS.ti-2019 software and Graneheim and Lundman analysis method were used to analyze the data and Guba and Lincoln criteria were used to evaluate the transferability of the results.
*Results:* The results showed that social media is both a threat and a flourishing platform for adolescents. Findings were classified into 2 main categories and 8 subcategories: threats of using social media including 5 subcategories such as unhealthy lifestyle, increased risky sexual behaviors, academic challenges, tensions, psychological effects, and unconditional freedom, and opportunities to using social media including 3 subcategories such as psycho-social development, knowledge gain, and increased interactions.
*Conclusion:* To strengthen social media opportunities in the face of its challenges, measures such as strengthening media literacy and teaching the correct use of the Internet and social media, educating adolescents and parents about the dangers of social media, educating and empowering parents to effectively communicate with children, producing content tailored to the cultural context and interests of adolescents, using affirmative approaches and removing access restrictions can be helpful.

## 1. Introduction

Today, the use of social media (SM) has become an integral part of most people's lives [1, 2]. SM refers to any digital platform, website or app that enables people to create and share content, and connect with each other. These involve the platforms Facebook, YouTube, Twitter, Instagram, gaming sites and other similar interactive websites [3, 4, 5]. Many of these platforms have revolutionized communication among digital-aged adolescents, who are some of the most prolific and active users of this technology [1, 3, 6]. Modern digital platforms are easily accessible and intensely stimulating; Smartphones have facilitated access

to these applications (apps), which account for a large part of overall adolescent screen time [3, 6, 7].

According to a survey conducted by the Pew Research Center, 95% of teens have their own smart phone or access to one and 97% use a SM platform [7]. In the Iran (where the present study was conducted), most adolescents now use social media and internet. A majority of adolescents (80–90%) also have access to smartphones, which enable social media and internet use as they move through their homes, schools, and communities [8, 9, 10].

For adolescents, social media and internet use are almost ubiquitous. As social media use is rising among adolescents, the benefits and

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drawbacks of this use on adolescent development and health status are areas of concern [3, 11, 12]. It has been demonstrated in recent research that increasing social media use is one important factor affecting adolescents' mental health, and that social media use may have more adverse psychological impact on girls than on boys [7, 13, 14, 15].

Gender is an important factor here. Gender may relate importantly to the reasons underlying Internet use and the patterns and types of social media use. In comparison to boys girls spend more time chatting and doing activities in social networks; boys play games more intensively [7, 16]. On the other hand, girls encounter risks related to the contact with other people (whether through chatting or social networks) such as bulling, sexual harassment or meeting a sexual aggressor [7, 16, 17, 18]. Likewise, girls tend to spend more time on social media. This means that girls' social media use may have rapidly expanded, which could lead to more depressive symptoms, among girls [19, 20].

Social media use has also been associated with a wide range of unhealthy lifestyle behaviors among adolescents, such as physical inactivity [21], poor eating behavior [22] and poor sleep [23]. It also, negatively affect family relationships [22, 24, 25] and academic performance [25]. However, Social media can significantly facilitate collaborative and self-directed learning among adolescents [26]. Also, Internet and social media has become an indispensable necessity for female adolescents in modern society [15]. The literature on SM and adolescents reveals associations between SM use and increased self-esteem, increased social capital, safe identity exploration, social support, and more opportunity for self-disclosure [12, 27].

The use of the internet and social networks as tools of a networked society has increased significantly among Iranians. According to the results of a study in Kermanshah can be concluded that the use of virtual networks among youth in the study population have contributed to a variety of social disorders [28]. Although studies have been performed on behaviors of adolescents of both genders in social media, they have not taken a deeper and more comprehensive look at the engagement of adolescent girls in these networks. Also, no studies have simultaneously investigated both opportunities and threats, especially in Iran. So, considering the importance of educating adolescent girls as the future mothers and mentors and their roles in the future development of the country, the extent of presence of adolescents in social media and its consequences on the one hand, and the lack of qualitative research on adolescent girls and the importance of recognizing the opportunities and threats of social media for proper planning and policy-making on the other, we may recognize the need for the present study using a qualitative approach. On the other hand, excessive use of social media in Iran, especially in Kermanshah (a place with high unemployment and young population) and its consequences for the young generation [28], therefore, the present study aims to identify opportunities and threats of using social media among Teenage girls in Kermanshah in 2019. In other words, the purpose of the study is to find out what opportunities are

available to girls in cyberspace, and what risks and dangers it poses to them.

## 2. Methods

### 2.1. Design

In this study, a qualitative approach was used along with the conventional content analysis method. The qualitative method leads to a better understanding of sensitive topics. In this research method, the researcher is actively involved in the research process. In conventional content analysis, interviews with individuals provide a better understanding and richer data on participants' experiences and perspectives [29, 30, 31].

### 2.2. Setting and participants

The study area was Kermanshah, western Iran and study was performed in 2019. The study population included all adolescent girls aged 12–18 years. Inclusion criteria consisted of consent to involve in the interview and use of social media for at least 2 h during the day. Exclusion criteria were non-consent and leaving the interview by the participant.

### 2.3. Data gathering

After receiving the research ethics code from Iran University of Medical Sciences (No.1394. 9221108204), the data were collected using a guiding questionnaire, semi-structured interviews and focus group face to face discussions from April to February 2019 with purposeful and standard sampling and the maximum diversity index with the participation of 36 adolescent girls (Table 1). At the beginning of the interview sessions, the study objectives were explained and the participant was informed about the ethical codes regarding the confidentiality, anonymity and being free to not respond or leave the session. Then, the participant signed a written consent form and with his permission, all conversations were recorded on tape. Interviews and group discussions began with a few general questions, such as a brief description of daily activities and leisure time, concerns, and life satisfaction. In order to drill into the depth, some probing questions were asked based on the responses of the participants. On average, each interview lasted 45–60 min and the focus group discussion lasted 90 min. The time and place of the interviews were decided by the participants in public spaces, city libraries, parks, schools, or researcher's home. The data analysis process began after the first interview, and the codes obtained in each interview were inquired again as questions in subsequent interviews for researchers to determine if other participants had similar experiences and to get richer concepts. The sampling and data collection continued until data saturation. When we came to data saturation, i.e. when interviews could no more provide us with new information and no new codes could be formed, we stopped collecting information. In fact, one criterion for detecting saturation is the repetition of previous data. This means that the researcher is confronted with data that is repetitive and repetitive. For example, when an interviewer receives similar and repetitive comments in an interview, he/she can guess that he/she has achieved data saturation. However, it has been suggested that after the researcher feels that the data obtained are being repeated, he/she should conduct several additional interviews to confirm the theoretical saturation [32]. In total, 20 individual interviews and 3 focus group discussions were conducted.

### 2.4. Data analysis

Graneheim and Lundman method [33] was used to analyze the data. In the first stage, all the interviews were transcribed on paper and after typing them in Word-2019, they were entered into ATLAS. ti-2019. In the second stage, the transcripts of the interviews were reviewed several

**Table 1.** Demographic characteristics of the participants.

| Characteristic | Groups | Frequency (%) | Mean ± SD |
|---|---|---|---|
| Age | - | - | 15.33 ± 1.85 |
| Income level | Low | 10 (27.77) | - |
| | Medium | 20 (55.55) | - |
| | High | 6 (16.66) | - |
| Family size | 4 < 5 | 31 (86.11) | - |
| | 4–6 | 5 (13.88) | - |
| | 6> | - | - |
| Live with parents | Yes | 34 (94.44) | - |
| | No | 2 (5.55) | - |
| Academic status | Student | 36 (100) | - |
| | Non student | - | - |

times by two members of the research team so that the researchers master the data sufficiently. In the third stage, the data were broken in units of meaning (codes) in the form of sentences and paragraphs. Each theme was then divided into subcategories. Therefore, categories and subcategories of all interviews were determined and compressed. The codes were classified based on conceptual and semantic similarity. The data loss occurred in all units of analysis and main and sub-classes, and finally, the data were placed in the main categories that are more general and conceptual.

### 2.5. Trustworthiness

To evaluate the quality of qualitative results, Guba and Lincoln trustworthiness criterion was used [34]. Trustworthiness is used to refer to the evaluation of the quality of qualitative research results. Reliability is the degree to which one can rely on the findings of a qualitative research and trusted their results. Guba and Lincoln believe that the reliability criterion includes four separate but related criteria: credibility, dependability, confirmability, transformability. In this study, to determine the credibility of the results, techniques of long-term engagement with participants, researcher self-review during data collection and analysis, and manuscript review by participants were used to resolve any misunderstandings. This means that the transcript of the interview was provided to the participant to confirm their statements and if there is any ambiguity in some statements, they should be corrected. In fact, the goal was for the findings to be exactly what the participants thought, and it eventually reached all the participants. Dependability was ensured by typing and analyzing interviews as soon as possible, using the opinions of experts in qualitative research and social media. Confirmability of the results was also established by observing the neutrality, discarding the presumptions as well as reviewing the codes and categories extracted by two members of the research team and reaching an agreement. Finally, transferability was ascertained by selecting samples with the greatest possible demographic diversity, providing many direct quotes, and richly explaining the data.

## 3. Results

The present study was conducted using a qualitative approach through semi-structured interviews with 36 adolescent girls. The demographic characteristics of the participants are given in Table 1. Data analysis led to the extraction of 2 major categories and 8 subcategories (Table 2). The two main categories, which reflected the experiences of adolescent girls in social media, include the threats and opportunities of using social media, each of which is examined below.

### 3.1. Threats of SM use

A review of the participants' experiences showed that the use of social media threatens adolescents and they had experienced these threats from different dimensions. These experiences and perceptions were classified into 5 subcategories, which are described below.

**Table 2.** Major themes and sub-categories emerging from adolescents' experiences.

| | |
|---|---|
| Threats of SM use | Unhealthy lifestyle |
| | Intensification of risky sexual behaviors |
| | Academic challenges |
| | psychological effects |
| | Unconditional freedom in SM |
| Opportunities of SM use | Psychosocial development |
| | Knowledge gain |
| | Widening interactions |

- **Unhealthy lifestyle**

One of the consequences of engagement in the cyberspace is the development of an unhealthy lifestyle. That is, with its high potential, cyberspace promotes some negative behaviors and actions in the individuals. Inactivity, sleep disturbances, unhealthy eating behaviors, reduced healthy recreation, and showing off the luxury are some of the symptoms of this unhealthy lifestyle.

*"When I use the Internet, smart phone and SM a lot, I become less active..."* (Participant13, 15-year-old teenager).

*"I wish my mom gave me my tablet for only half an hour a day and I had a series of other hobbies like sports"* (Participant 3, 17-year-old teenager)

*"I'm online most of the time and I chat until 4 a.m. I wish my parents would take these mobile phones from us"* (Group interview, Participant 27, 17-year- old teenager)

*"I search in SM late at night. This has affected my sleep. I sleep too late and my eyes hurt"* (Participant 5, 15-year-old teenager).

*"Social media has a profound effect on my body and nutrition. I get on food-related pages, get hungry, and I have to eat something. Then, because the things I eat are not the ones I saw on Instagram, I do not get enough at all. I eat a lot and get fat"* (Participant 1, 18-year-old teenager).

*"One may consider his own life as disadvantaged and may compare the realities of his own life with the appearances of others'. We show off on Instagram and only show others what we do, what we eat, what we wear, how we talk etc."*(Participant 7, 18-year-old teenager).

- **Intensification of risky sexual behaviors**

Adolescence is characterized with exploring one's sexual identity. Social media is a place where this kind of exploration often happens. Behaviors such as early romantic relationships and observing sexual images in social media exacerbate this situation. These behaviors gradually replace healthy ones and pose challenges and threats to the real life of adolescents.

*"I saw teen girls who see a lot of sexy photos on SM. This causes their puberty to occur earlier. They are more likely to experience risky sexual behaviors"* (Participant 12, 18-year-old teenager).

*"Anyone who connects to SM, chats with one person definitely. First, it is a simple chat...But it is slowly becoming normal. The person then makes appointments with the opposite sex outside the home"* (Participant 8, 17-year-old teenager).

*"I know someone who met a guy (the opposite sex) in the cyberspace, but after a while, she realized that everything he said was a lie and she was the one who was hit"*(group interview, Participant 30, 16-year- old teenager).

- **Academic challenges**

Another subcategory affected by social media as a threat is related to the academic consequences. Permanent engagement in social media causes academic failure and inattention to homework, and at higher levels, it amounts to students' inappropriate treatment of teachers. Generally, social media alienates students from the school.

*"Many times, excessive use of SM has caused me not to study and to be lazy.It generates many problems in my life ..."* (Participant 3, 17-year-old teenager).

*"The more use of SM affects the performance of homework and reduce it quality..."* (Participant 20, 12-year-old teenager).

- **psychological effects**

Using the Internet and engagement in social media can cause great psychological damage to adolescent girls. They experience depression, stress, isolation and loneliness, addiction and severe psychological and intellectual dependence on social media on a large scale.

*"At this age, children become depressed more frequently. They are always stressed and most of the time, they are engaged in social media. If there is no cyberspace, you can be with you family more often, but it's not so"* (Participant 9, 14-year-old teenager).

*"During adolescence, a teen becomes very addicted to mobile phones and SM…"* (Group interview, Participant 36, 15-year- old teenager)

*"I have reached a point where I no longer care about anyone in the real world. I just resort to SM to see what happened and who sent me the message. SM has made me isolated and depressed"* (Participant 12, 16-year-old teenager).

- **Unconditional freedom in SM**

Unconditional freedom in SM was recognized as fifth threat of SM use in the study participants. They told that teenagers are free in cyberspace and have access to all SM. Freedom to work in SM spaces, combined with a lack of media literacy and parental monitoring, and their lack of knowledge about SM programs and sites used can be a threat to adolescent girls.

*"Teens can see anything in SM, even if they do not read it themselves. Access to potentially harmful sites is simple. I feel very free in cyberspace and SM world…"* (Participant 2, 16-year-old teenager).

*"When I search in SM, I feel free. They must set an age limit for using the Internet. Internet access is now free and parents cannot monitor their children. Parents should aware of the nature of SM sites. Adolescents need to identify SM that provide inappropriate content…"* (Group interview, Participant 33, 17-year- old teenager).

### 3.2. Opportunities of using social media

Besides being a threat, social media also has potentials and positive aspects that could be useful opportunities to users. In this study, 5 sub-categories were extracted as manifestations of opportunities in social media.

- **Psychosocial development**

The participants believed that SM, as an environment in which there is a lot of interactions, may increase psychosocial development in teen girls. They told that increasing social capital, creating conditions for learning, raising skills and empowerment of teenagers is the outcomes of psychosocial development.

*"It's not always the case that you make bad friends. Sometimes someone comes up who can be a very good friend to you. I have seen virtual relationships have in cases led to marriage"* (Participant 19, 18-year-old teenager).

*"You can become friends with only one to talk to and deal with, no more. That is, safe relationships are also possible in the cyberspace"* (Group interview, Participant 22, 16-year-old teenager).

*"Some people can't pour their heart out in the real world, and social media allows them to do so"* (Participant 2, 17-year-old teenager).

*"There are some groups in SM that may help to increasing self-confidence of teens. When my self-esteem decreased, I use these channels"* (Participant 6, 16-year-old teenager).

*SM makes teens happier and less depressed by creating fun and entertainment".* (Participant 16, 14-year-old teenager).

*"For a while, I did not have time to go to the gym, and I found many opportunities in the cyberspace. A complete gym can be found on Instagram. There are all different types of exercises in Google that you can use"* (Participant 1, 18-year-old teenager).

- **Knowledge gain**

Social media, as a widespread network in all sections of society, has features and competencies that move in the direction of increasing the knowledge and awareness of its users. Participants believed that cyberspace has a significant role in increasing their level of awareness and knowledge and considered this potential of the social media as an opportunity for its proper usage. Also in this regard, the use of cyberspace was considered to help educational processes such as tuition, academic counseling and research, which was one of the positive points of cyberspace for the adolescents.

*"SM can be very useful, especially in learning English language… I also receive academic advice via Telegram"* (Participant 10, 18-year-old teenager).

*"I can ask my questions about the lesson or school from my teachers and classmates in Telegram groups. I can get help from virtual networks for my research or lesson"* (Participant 5, 15-year-old teenager).

*"I can raise my public information in cyberspace. Of course, the content of some SM is wrong. We have to select a valid channels and sites to find correct information"* (Participant 11, 15-year-old teenager).

- **Widening interactions**

Another feature of social media is the universality of social interactions and the establishment of cultural bonds between individuals around the world. In fact, social media provides a platform for the formation of new identities and provides a space for people to interact internationally, where people have the ability to share their experiences and ideas.

*"SM platforms allows users to participate. We can chat with several people in SM and share our opinions with them. This network increases social interactions".* (Participant 12, 16-year-old teenager)

*"I can talk in SM with other people from different countries and cities of the world and share my experiences with them"* (Participant 13, 15-year-old teenager).

*"In terms of culture, the use of SM has had a very serious effect on my life. For example, when I talked to other people in different countries and cultures, I am able to know them better and accepted that their cultures are also respected"* (Participant 1, 18-year-old teenager).

## 4. Discussion

The present qualitative research was conducted aiming at identification of the opportunities and challenges of using social media among Iranian adolescent girls. The results showed that social media has positive and negative consequences and functions. It provides users with useful and appropriate opportunities as well as threats and challenges at the same time.

The threats of social media are the first and most important research finding characterized by different subcategories. One of the challenges of social media is shaping an unhealthy lifestyle, in which, people are sedentary and lack healthy recreations. Consistent with our findings, Wang et al, 2012 and Kojima et al, 2019 showed that long term engagement of adolescents in social networks and the Internet is associated with a general decrease in physical activity and inattention to one's health [21, 23].

Numerous studies have also confirmed the relationship between hours of social media use and physical inactivity and, consequently, weight gain and obesity in adolescent [22, 35, 36, 37]. Given that prolonged engagement on social media leads to physical activity and sedentary lifestyle with consequences such as obesity, it is essential to promote and encourage adolescents to engage in physical activity besides reducing social media use. Sleep disorders were also common among the participants in the present study. This means that among adolescent girls, excessive use of social media, especially at night and at bedtime, was associated with delayed sleep time, shorter sleep duration and lower sleep quality. This is in line with the previous findings [22, 23, 35, 38, 39, 40, 41].

Social media stresses such as fear of missing out (FOMO) and cognitive-emotional stimulation [39, 40, 42], as well as smartphone ownership [41, 43] anticipate more engagement in social media at night and before bed and, as a result, late sleep. Obviously, excessive use of social media changes and reduces the time and hours of sleep; and, a shorter sleep will have negative physiological and psychological consequences. Restricting overnight access to social media and smartphones, as well as teaching methods for coping with social media stress and self-control, is recommended for teenage girls using social media at bedtime.

In addition, the results of our study showed that because of observing delicious foods displayed by other Internet users in the cyberspace, adolescent girls who use social media such as Instagram experience eating disorders (by seeing these ideal images of food) directly (stimulating appetite and craving to eat etc.) or indirectly (impact of food marketing, brands, etc.). This is consistent with previous studies [44, 45, 46, 47, 48, 49]. For example, Spence et al, 2015 showed that frequent exposure to the virtual foods and the associated neurological, physiological, psychological, and behavioral responses may often exacerbate a person's physiological hunger, potentially leading to weight gain [44]. Studies also highlight the role of social media influencers (mostly peers) as a powerful tool for regulating dietary norms, which in turn may influence adolescent food preferences and choices. Through digital food marketing, they expose adolescents to branded and often unhealthy non-original foods, and by adversely affecting adolescents' eating behaviors, they pose a risk for unhealthy diets and, in turn, weight gain, obesity, and other chronic health disorders [45, 46, 47].

The results of our study also showed that teenagers who use social media, especially Instagram, only seek to show the ideal life of their own. Similarly, several studies have reported that adolescents on social media seek to have the best portrayal of themselves and may not tell the truth about themselves in this case [3, 45, 48]. Trying to present the ideal life may lead teenagers to use inappropriate ways for refusing to tell the truth, and to deceive others, which harms themselves and others. In fact, Instagram manipulates the truth or, at best, conveys only part of the truth to its audience. This leads to a comparison between the real life of people with the appearances of other people's lives, as well as to disorders like low self-esteem, dissatisfaction, depression, etc., especially during adolescence when social comparison increases [3, 19, 50].

Another threat of using social media is the escalation of risky sexual behaviors. As teens explore their gender and identity on social media sites, they may be exposed to inappropriate sexual images, videos, or texts that could put them at greater risk for sexual vulnerability and risky sexual behaviors. These behaviors have been observed in other studies in relation to adolescents around the world, and especially Iran [3, 8, 11, 49, 51]. Similar studies showed that web-based text messages can be directly related to sexual activity among adolescents and are sent to start dating or maintain an existing romantic relationship. Such a situation exposes them to threats and dangers in sexual relations [5, 8, 22].

In addition, according to previous findings, teenage girls often overestimate the trust they can put in these digital dating relationships and confuse relationship for intimacy in a way that may harm them. They experience the emotional and behavioral consequences in the offline environment only after experiencing digital dating abuse victimization [52, 53, 54, 55]. Appropriate measures are required to educate and prevent these issues important.

Academic challenges were another consequence of social media for teenage girls. Numerous studies have shown that uncontrolled use of digital technologies and social networks has a negative impact on students' education and academic performance, confirming our results [25, 56, 57, 58, 59]. Other studies have reported that adolescents who are more active in social media have lower GPAs and study fewer hours [23, 60]. It is clear that spending time in social media and the Internet causes adolescents to not concentrate enough on school activities, and it reduces their reading time and impairs their overall academic performance. Therefore, adolescents need to be taught to plan and schedule a specific time to use social media.

One of the most important threats of social media is stress and psychological consequences. This is consistent with the results of various studies that showed that adolescent girls addicted to the Internet and social media had more psychological problems. For girls, higher levels of depressive symptoms may lead to more use of social media and put them in a vicious cyclic of relations [2, 4, 15, 19, 20, 61]. On the other hand, in our study, girls' excessive use of social media had often caused depression, stress, anxiety, and severe psychological and intellectual dependence on social media. Previous studies also showed that girls spend more time on social networks and this can lead to symptoms of depression, stress and anxiety and dependence [13, 14, 19, 20, 62]. In addition, similar to previous research, our results suggest that specific smartphone apps, including calls and instant messaging, help increase feelings of dependency. Behaviors such as forced and frequent checking of messages due to fear of missing out (FOMO) were associated with more involvement and dependence of adolescent girls on mobile phone and social media [2, 4, 63, 64, 65, 66]. Also, increased feelings of loneliness and isolation as a result of excessive use of social media have been shown in various studies [9, 63, 67]. This was also observed in the present study. In general, dependence on the Internet and social media causes a person to be isolated from the family and society, and it leads to loneliness, depression and reduced social relationships. This depression may lead adolescents to turn to dangerous and threatening social networks and sites. Given that adolescents are at a critical age of puberty and the formation of personality and independence, necessary measures have to be taken to reduce these tensions and psychological consequences of social networking so as not to ruin their future. The role of parents and their interaction with children is very important in this regard. Psychiatric educators need to consider this reciprocal relationship between mental health status of teenage girls and their SM use.

Unconditional freedom in SM is the last subcategory to emerge as a social media threat with unintended consequences. In the study of Wang and Cheng 2019, the results showed that adolescents who used the Internet without parental supervision faced more challenges [67]. Another study by Wartberg et al, 2017 found that adolescent's improper use of the Internet was associated with poorer parental performance and monitoring, increased parent-child conflict, and lower parental Internet literacy [68]. A similar study showed that the improper use of social media in adolescent girls was mostly related to low health literacy and poor parental monitoring [69]. Tartari, 2015 also showed that the unsupervised relationships in social media cause parents to limit its use [5]. It is clear that increasing access to social media via the smartphone, which is usually a personal device and under little parental control, can be detrimental to the cyber security of children and adolescents [8, 70].

It has also been found that daily access to the Internet and Internet cafes, free sharing of personal information, time spent on the Internet, use of social media and parental Internet literacy all affect the experiences of cyber victimization and cyber bullying among adolescents [70]. Free and unrestricted virtual networks are accessible and adolescents are left without control and supervision and do whatever they want. This situation causes them to be exposed to unwanted and unsafe content and to reach puberty earlier, so that they increase their efforts to satisfy their sexual needs due to various stimuli of cyberspace. Greater efforts are needed to teach digital literacy from kindergarten through 12th grade; inform adolescents and child about safe online behaviors; and establish

rules on the amount of time that an adolescent or preteens can spend online or on their devices in each countries to reduce the freedom of teenagers in digital space [8, 22, 70, 71, 72]. Given that the use of social media by adolescents coincides with their sexual, moral, physical and identity development, it is necessary to provide appropriate policies and training for families to monitor and educate their children.

The other side of social media provides users with opportunities and potentials, such as helping the adolescent girls develop their psychosocial development. In line with our results, several studies have shown that the use of social networks and adolescents' relationship with each other increases social skills, self-confidence and development in adolescents [5, 73, 74, 75, 76, 77]. With the rise of Health, mental health services could create excellent opportunities to better engage adolescents in their care [77]. Using social media as an opportunity provides a platform for the adolescents who face emotional tensions and challenging situations in the real world to regulate and strengthen their emotions [6, 11, 12, 75, 76, 77]. Also, the results of several studies showed that social media itself has a significant effect on increasing social capital, socialization, identity, social empathy on adolescents and increases the opportunity for self-disclosure and self-expression [12, 27, 55, 73, 74, 75]. Although virtual relationships are often unhealthy, strengthening the potential of social media for healthy growth and overcoming its negative aspects can play an important role in enhancing the personality and empowerment of adolescents. This requires comprehensive programs and appropriate policies.

Other findings of the study included the effects of social media on the enhancement of knowledge and awareness, information, assistance in educational processes such as academic counseling and research. In line with our results on the importance of social media in the enhancement of students' knowledge and awareness, in various studies, the applications of social media have been shown in educational settings [5, 6, 26, 59, 78, 79]. In a study on the use of online social networks, Mtshali et al, 2015 showed that online conversation is useful and practical as a strategy in teaching and learning [80]. Given the potentials of social media in teaching and learning, educators and teachers must embrace these new technologies and use their potential.

The latest subcategory of social media opportunities refers to the expansion of interactions and intercultural relations, by which, engagement in social networks provides adolescent girls with the opportunity to share their experiences and ideas and to acquire new identities through extensive and international relations. Similar to our results, various studies have reported the use of Internet and social media as a tool of interaction and communication with others [3, 5, 22, 55, 75]. According to a study by Shapiro and Margolin 2014, Internet and the social media can provide a platform for teenagers to connect with and embrace people who are somehow different, and to strengthen ethnic identity by building bridges beyond the local community [75]. Extensive global interactions and connections in the virtual world provide a fundamental basis to develop virtual empathy, foster a culture of convergence, and embracing opposing and unfamiliar ideas, and in the long run, to transform adolescents' values and attitudes as the next generation and create identity challenges. Accordingly, it is essential that the adolescents are properly trained to understand the sensitivities of social media and to adhere to rules and principles to be prevented from getting into corruption. Identify the variables that eliminate or reduce the positive effects of SM use on adolescents may help to correct judging the function of it. In addition, more efforts to determine the effectiveness of different types of SM on adolescents are recommended.

### 4.1. Limitations and strengths

The use of the two methodologies of individual interviews and focus groups for data collection, method of selecting adolescents, comprehensive review of challenges and opportunities and adolescents' experiences are the most important strengths of this study.

Although, the study was the first study on the teenage girls' experiences about SM usage, it suffered from some limitation. The first limitation was that findings were gathers from a qualitative research design that their results cannot be generalized to other populations. However, the study may provide some suggestions for stakeholders in the field of SM. The second limitation of the study was that data were collected from a sample of teen girls in Kermanshah city, Kermanshah province, Iran. Performing further researches to explore the experiences of teens on SM usage in subgroups of adolescents (such as teen boys and early adolescent) and geographic areas (such as villages) in Iran are essential.

Then, the type, manner and activities of using social media, such as the type of platform or activities such as chatting and online games, are different and we could not examine them separately because we only considered the general views and experiences of social media.

### 5. Conclusion

The results showed that social media is, at the same time, a challenge and a threat to lifestyle, education, social relations and ethics as well as a good platform for growth and prosperity, safe relations and interactions, increasing social capital, escaping from loneliness, social identification, enhancement of skills and empowerment of adolescents. Accordingly, it is important to try to strengthen and use the opportunities and positive features of social media and empower the adolescents against its challenges and threats. In fact, young people should prioritize the opportunities of social media to its threats. Strengthening media literacy and use of social media in school and mass media, educating adolescents and parents about the dangers of social media, educating and familiarizing adolescents with the correct use of the Internet and cyberspace (potentials and capabilities, how to manage privacy, etc.), educating and empowering parents to communicate and interact effectively with their children, replacing virtual activities and interactions with real-world ones, organizing social relationships in cyberspace in parallel to real space, producing content tailored to the cultural conditions and interests of adolescents, and using affirmative approaches and removal of restrictions and filtering are among the measures to overturn the threats and negative consequences of cyberspace and convert them into opportunities.

### 6. Ethical approval

Iran University of Medical Sciences Ethics Committee approved the protocol of the study (No.1394. 9221108204).

### 7. Informed consent

The objectives of the study were explained to the participants and informed consent was obtained from them.

### Declarations

*Author contribution statement*

*Funding statement*

## Data availability statement

Data will be made available on request.

## Declaration of interests statement

The authors declare no conflict of interest.

## Additional information

No additional information is available for this paper.

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