
The privacy paradox in using Facebook among Arab teens: between declarations and behaviour

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Abstract: The present study examines the issue of privacy among teens using the social network, Facebook. It examines, on the one hand, how Arab teens view the issue of privacy, and on the other hand, how participants actually behave. The study is based on a questionnaire delivered to 500 Arab teens from Israel. The study's results show that certain private information is more readily disclosed by Arab teens than one's family. Most participants reported that they are aware of the issue of privacy yet do not make changes to the site's default privacy settings. This behaviour supports the existence of some degree of the privacy paradox among participants, which is likely to be expressed in various online interactions. The results of the study can help educators and parents gain a better understanding of teens' behaviour in the digital arena, perhaps contributing to the creation of better and more suitable educational approaches.

Keywords: social media; Facebook; privacy; privacy paradox; teenagers; Arab society in Israel; new media; online interaction.

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1 Introduction

The internet is currently an inseparable and significant part of children's and teens' lives. Over the last decade, many studies have been published about internet-use patterns, and their effects on psychological, social, and academic indicators among children and teens. For the most part, these studies stem from a suspicion that new information technologies have negative effects on children (Livingstone, 2003; Ribak and Turow, 2003; Wartella and Reeves, 1985).

Digital communication has become more available and more immediate than ever before. Connecting to the internet has also become much easier and quicker due to the development of various mobile and smart devices and applications, as well as, the decreased cost of internet usage. This has increased the amount of interactivity activity among internet users. It has caused much apprehension among parents and educators, because of how difficult it is to be involved in and follow interpersonal connections created online, or to mediate between their children and the range of content available on the internet. This concern was described powerfully by Postman (1985), who called the exposure of youth and teens to adult content as 'the disappearance of childhood'.

According to Postman, children are not mature enough, neither emotionally nor cognitively, for the content to which they are exposed. The open communication and interactivity in the era of Web 2.0 arouse concern regarding users' privacy and that of their families, which can sometimes lead to very real dangers (Ribak and Turow, 2003).

Generally, within the Arab society in Israel studies point to wide gaps between teens and adults in their level of access and skills of digital technology (Ganayem et al., 2009). Since the adolescent stage is a very significant one in personal and social development, parents and educators currently face a substantial challenge when it comes to educating the digital generation and protecting their privacy.

The present study's main objective is to examine the level of awareness regarding the issue of privacy among Arab teens using the social network, Facebook, and to examine the participants' actual behaviour when facing this issue.

2 Theoretical background

2.1 Expanded use of social networks

Online social networks allow users to join an existing social network or to create a new one of their own. There are various systems on the internet that allow one to create these networks, such as Facebook, MySpace, LinkedIn, Friendster, GooglePlus, etc. Today, these networks have hundreds of millions of users and billions of daily views. According to statistics from Facebook, Inc. (2016), the number of daily active users (DAU) has reached an average of 1.09 billion as of March 2016. This number presents a 16% increase when compared with that of the previous year. At the same time, the number of monthly active users (MAU) has reached 1.65 billion as of March 2016, a 15% increase when compared with the same month, the year before.

Those who join the social network fill out a personal profile which contains required fields and optional fields. One's profile serves as a set of identifying data, which usually includes one's real or false name, date of birth, sex, country of birth, home address, hobbies, etc. Of course the information a user enters into the system is not verified or checked.

According to a 2010 survey conducted by the website BrianSolis.com and Google, Inc., 57% of Facebook users are women. The poll also found that, while most women use social networks to connect with others and share their personal lives, male users tend to use them to gather information and improve their standing. A TIM survey (1,700,000 Friends, 2008), conducted by TNS/Telesker, found that Israeli web-users not only visit social network and sharing sites in large numbers, but also do so quite frequently. Among their many activities on these networks, it was found that they spend time gathering information for the sake of making consumer choices about which products and services to acquire. This same survey showed that almost 70% of the Israelis registered on social networks use them for corresponding with friends – found to be the preferred activity among all age groups. Frequency of visits was also found to be high. Some 30% responded that they visit social networks at least once a week.

Official data released by Facebook itself showed that, in May 2013, 4 million Israeli users used Facebook and uploaded 42.4 million pictures, gave 764.4 million likes, sent 711.5 million messages, and wrote 192.2 million comments. This data shows that Israelis use a wide range of Facebook's tools. Among the 4 million users, 2.4 million used the

service daily. The data also showed that almost 28% of users are ages 18–24; the next largest group was users aged 25–34, who comprise 27% of the users. After them were users aged 35–44 (some 15%), ages 13–17 (some 13%). In the gender category, a slightly greater presence of males was found; they comprised 52% of all the users (Kaber and Orback, 2013).

The EU study, EU Kids Online II, was conducted in 2012 among 25,000 children ages 9–16 in European countries, aiming to examine children's, teens', and parents' online behaviour, identify and assess network risks, and propose policy to deal with these risks. The study found that 40% of children ages 9–16 search for new friends on the internet, 34% among them added people to their list of friends even though they had never met them in person, 15% of children sent personal details to people they had never met in person, and 14% of those studied sent a picture or video of themselves to strangers they had never met before (Livingstone and Haddon, 2012).

Recently we have witnessed a significant, and perhaps surprising, increase in Facebook users in the Arab world. According to a research report from the Dubai School of Government's Governance and Innovation Program, there has been an increase in social network use in the Arab world especially during the time of the Arab Spring protests. The number of Facebook users in the Arab world was approximately 28 million as of the beginning of April 2011. There was a 30% increase in the first quarter of 2011, as opposed to an 18% increase in the same quarter of the previous year. According to data from October 2011, the number of Facebook users in the Arab world currently stands at about 32 million users, of which 70% are young users (Darkawe, 2015). Facebook has penetrated to the largest degree in the United Arab Emirates (50.01% of residents), followed by Bahrain (36.83%) and Qatar (30.63). For the sake of comparison, we note that the percentage in Israel is 44.18%, and in the Palestinian authority, 13.10% (Darkawe, 2015).

Around one half of internet users in Israeli Arab society are on Facebook (The Galilee Society, 2011); internet use among the general Arab population in Israel is around 60%. Studies show that there are significant digital gaps between Arab society and Jewish society in Israel, including in schools. Digital gaps between different generations, as well as between males and females, have been found within the Arab society, itself (Ganayem et al., 2009). The gaps are not only in terms of access and use but also how the site is used. Teens are the largest population on the internet and on Facebook. In a study done on usage patterns of Arab teens in Israel, the frequency of Facebook use was found to be daily among most Arab teens (73.8%) (Ganayem et al., 2011). This percentage is one of the highest worldwide, and raises the question of whether this population is aware of privacy issues. The study also shows that most of the usage is for entertainment purposes and getting to know people, and is done at times not especially appropriate for school students.

2.2 Facebook usage patterns among teens

According to Lenhart and Madden (2007), 46% of the young people surveyed reported that at least one of the details they entered in their profile is incorrect. In general, users share personal experiences, pictures, opinions, etc. with their network friends; together, these things comprise an online identity that the user seeks to show to his or her online friends. All interactions between users are saved in the system's servers, while a large

portion of the information is displayed on the users' page by default, unless they change their profile's privacy and disclosure settings. Gross and Acquisti (2005), who studied 100 Facebook profiles, found that 89% of users used their real names. The reason for this is that some people describe Facebook as the 'Google of people' (Jarvis, 2007).

Most of the published studies show that Facebook users tend to use the network to strengthen their connection with familiar friends – as well as classmates, in the case of teens. Mesch and Talmud (2007) showed that the online relationship is weaker than one created in school, while stronger online relationships are usually based on real-life acquaintance. Other studies have verified this, demonstrating that Facebook users tend to seek-out people they know in real life more than they do strangers (Lampe et al., 2006). The 'Israeli Teens in 2010' survey showed that teens' favourite activity is interacting with each-other through social networks in their free time (Cohen and Eini, 2012). Around 56% of Arab teens communicate daily with their friends from school, while some 36% communicate with strangers; this is considered a very high number and raises questions regarding their awareness of the dangers involved in communicating with strangers (Ganayem et al., 2011). 53% reported that they use Facebook actively (using chat, comments, and 'likes') on a daily basis.

Cohen and Eini (2012) studied 267 students in Israel, ages 13–18, to examine how and how much teens are using Facebook. They found that, on average, teens have 502 friends on Facebook, and that the amount they used it and its various functions was quite large. The main objective that teens have in using Facebook is passing the time during their free time (58%); the second objective is to stay in touch with friends (54%). Most teens upload pictures at least once a month in the following order: pictures of themselves (89%), of friends (88%), of parties or events (82%), of trips (78%), and finally, pictures of family (67%).

In terms of what characterises Facebook friendships and communication between them, it appears that, among Facebook users in the USA, 26% of participants said they use the 'like' tag, 20% react to others' pictures, 22% react to a status or write on someone's wall, and only 10% send private messages; all of these actions refer to use on a daily basis (Hampton et al., 2011). It appears that most users communicate with others in a public manner. In terms of number and types of friends, Hampton et al. (2011) found that the average number of friends is 229, and an average of only 7% of a user's friends are strangers (never met in person). This survey shows that most Facebook friendships are based on previous acquaintance with people from an academic framework, from work, or family. Close family makes up around 8% of a user's friends, while extended family makes up 12% of a user's friends.

2.3 Teens' hurtful behaviour on social networks

Most correspondence among teens on the social network is with students from their school. Not infrequently, this situation leads to hurtful discussions about other students or even teachers, which can grow and have immediate effects on students' and teachers' lives in school. It is well known that teens have the need for self-fulfilment, social belonging, and emotional experience. Mesch and Talmud (2010) claim that teens reveal personal details about themselves online in order to avoid mockery or social rejection. However, we know of different degrees of harm among teens that have sometimes come to extremes circumstances such as suicide, murder, or rape (Mesch and Talmud, 2010).

A 2011 survey by the Teachers' Association in Israel and the Geocartography Institute, with 600 respondents (200 teachers, 200 students and 200 parents), found that a sizeable number of teachers (19% of teachers surveyed) suffer from students intentionally harming them through the social network (Avger, 2014). 10% of teachers reported that they experienced insults, 7.5% had curses or verbal abuse directed at them, and 3% of teachers had students who took offensive pictures of them and shared them among their Facebook friends. According to this survey, teens on Facebook also suffer from other children deliberately hurting them, but at a lower rate than teachers. 12% of teen reported that they were insulted by other students on the social network, some 4% had curses or verbal abuse directed at them, and 3% had rumours spread about them. 21% of teens also reported that they had been exposed to a video on Facebook in which one of their classmates or teachers appeared in a degrading or embarrassing manner.

A study of middle-school students in Israel found that around 16% of the participants had experienced abuse, and 33% witnessed abuse on social networks (Weisblay, 2011). Children and teens that use social networks are at a heightened risk for online abuse. The basis of this harmful behaviour is the negative use of true or untrue content; in many cases, this content is private information that the target would not want to be exposed to others.

2.4 Privacy on social networks

The conversation around privacy has grown recently, apparent in the large number of publications and articles on the topic (Acquisti and Gross, 2006; Baruh et al., 2017; Lampe et al., 2006; Bartsch and Dienlin, 2016; Buccafurri et al., 2015; Marwick and Boyd, 2014; Stutzman, 2006). Facebook founder, Mark Zuckerberg declared in 2012 that the era of privacy is dead (Johnson, 2010). This aroused a heated debate in various arenas: social, educational, political, legal, etc. Shay (2015) claims that privacy already has ceased to exist, and is nothing but an ambiguous illusion for those who have yet to recognise this disturbing fact – especially since Facebook decided that it can do whatever it wishes with the pictures and posters that users upload onto the site. An extensive debate continues around the issue of exposing personal information and threats to privacy; however, few empirical studies have reported on the issue in the context of social networks.

Privacy is a concept that involves different meanings, and depends on people and social norms. Privacy and disclosure are generally thought of as opposites. When something is considered private, it usually involves something that is inherently considered special or private and sensitive (Wikipedia, Privacy). Most websites, services, and technologies, including Facebook, encourage users to disclose personal information and to expose themselves almost entirely (Cohen and Eini, 2012). Internet users are giving up more and more on their privacy because, for example, sites may be offering advantages in exchange for disclosing additional private information, such as email address, phone number, location, and even credit card number. Many users also disclose personal information for social benefit, and thus are willing to lose some of their privacy for the sake of having more online friendships.

It is also important to discuss how teens view privacy, which is different than the way adults view it. According to Barnes (2006), teens' privacy is thought of more in terms of what parents are allowed to know about them. Thus adolescents feel they enjoy privacy

as long as parents have not been exposed to things the teens want to hide from them. Some researchers claim that the significant factor in terms of internet users' styles and patterns of use, as well as in raising awareness to the privacy issue, is not principally the issue of age, but other aspects – namely experience with the tool and manner of using it, and the user's digital literacy (Mesch and Talmud, 2010; Bartsch and Dienlin, 2016). On the other hand, Nosko et al. (2010) show in their research that as the age of users increases, the level of exposure of personal information decreases.

Ribak and Turow (2003) show that Israeli parents and children tend to provide information online more than Americans, who displayed greater concern about the damage the internet can cause their children. Lemesh et al. (2009) show that teens tend to share more personal details and information than children; this may be related to adolescence in terms of risk taking and expanding one's circle of personal acquaintances. They demonstrate that Israeli parents are less skilled than their children in internet use, and know little about their children's use of the internet. They also found that approximately 60% of children have been exposed to pornography sites, with older boys having higher rates of exposure than girls or younger boys. The study found that most of the online communication through instant messaging between children is done with friends that they know, and about a third of children communicate with strangers. It was also found that most middle-school and high-school children communicate with strangers and 30% even meet them in person. This type of communication can pose a risk for children and teens (Gross and Acquisti, 2005).

The default privacy settings on Facebook change frequently. On the one hand, the network offers more and more opportunity to disclose information; on the other hand, it has expanded user options for and control over privacy settings (McKeon, 2010). For example, Facebook recently added the option to signify a user's location, whom he or she is with, define who are one's family members, one's best friend, etc.

Various articles and surveys have shown that few users understand how to define their level of privacy and disclosure of their personal profile on social networks (Baruh et al., 2017; Kaber and Orback, 2013; Lemesh et al., 2009; Marwick and Boyd, 2014). According to Cohen and Eini (2012), most of the social network's users (65%) do not bother to change the privacy settings that Facebook suggests, which means that anyone can see much of the user's information and activities. Livingstone (2003) and Weisblay (2011) found that young people struggle with privacy settings on social networks sites, in part due to their low digital literacy; this may also be due, to a certain extent, to the poor design and structure of the settings pages on the site, which causes users to be unsure about how to control who sees what about them.

In an empirical study, Norberg et al. (2007) shows that social network users report awareness about privacy that is different, and even contradictory, to their actual level of disclosure of personal information. They also found that, even when there is an option to use tools for controlling disclosure of personal details, most do not bother to use them. Other articles also document that too many users lack an understanding of the consequences of their active social network use and the consequences of disclosing their information to others (Cohen and Eini, 2012).

Cohen and Eini's (2012) study found that, on the issue of privacy, teens do not appear to be aware of the inherent dangers of Facebook; even so, most of them are, on principle, inclined to protect their privacy. Teens are not overly inclined to confirm strangers as

their friends on the site. On average, they add people whom they do not know as 5% of their friends on Facebook. Most young people said that only their friends can see their wall, pictures, and profile.

A study conducted by Christofides et al. (2009), in the context of disclosing personal information on Facebook, demonstrates that most students disclose information such as: their relationship status, email, and date of birth to, on average, 297 'friends' and to an unlimited number of network connections on the site. Furthermore, the study found that students understood they were sharing more details about themselves on Facebook than they normally do elsewhere, although they also reported that privacy and controlling their personal information are important to them.

Acquisti and Gross (2006) found that most Facebook users provide their real name, full date of birth, and clear pictures of themselves on their profiles. These researchers examined profiles of over 4,000 students, and found that only a small percentage of them had made changes to their profile's default privacy settings. They also found that users who are concerned about online privacy expose large amount of personal information (Acquisti and Gross, 2006). This phenomenon, in which those concerned about privacy are simultaneously disclosing accurate personal information on their profiles, is also described by Barnes (2006), who refers to it as 'the privacy paradox'. The privacy paradox describes an inconsistency between users' statements relating to awareness of and concerns about privacy and their actual privacy settings and disclosure of information on the site.

The issue of online privacy in general, and specifically privacy on social networks, has been an issue of concern lately for parents and educators. In Arab society in Israel, teens are the largest group of internet users. There is not sufficient information about these teens and their attitudes towards privacy on social networks or their actual behaviour when it comes to privacy and disclosing information to others. The present study is therefore important, to deepen our understanding on this topic and increase our awareness of it.

2.5 Importance of the study

The rate of research on social networks has recently picked up momentum, especially because of social networks' broad use, particularly among teens. People use these networks for purposes ranging from recreation to social revolution. Responsibility and concern for teens' welfare in the online space demands that their level of awareness and patterns of behaviour on social networks be understood, guided, and tracked. Since there has not been research done on Arab teens in Israel on the topic of privacy on social networks, this study comes to fill a gap in the knowledge. The study expands our understanding of the patterns of use and maintenance of social-network privacy of Arab teens in Israel. The study's findings are likely to contribute to educators, parents, policy makers, and other researchers in gaining an understanding of the digital-world behaviour of Arab teens in Israel and its effects on them; the study can also contribute to the improvement of methods of communication with these teens in society, and to helping them use the internet wisely and safely.

3 Research objectives and hypotheses

The study's main objective is to compare the attitudes and actual behaviour of Arab teens around the issue of privacy on the social network, Facebook.

3.1 Research questions

The central research question is:

- What are the views of Arab teens in Israel regarding privacy, and what are their use patterns with regards to privacy on the social network, Facebook?

3.2 Research hypotheses

- 1 Teens disclose different kinds of personal information in varying degrees.

We hypothesise that Arab teens disclose accurate personal details such as first name, date of birth, and email. This hypothesis is based on results from studies by Christofides et al. (2009) and Acquisti and Gross (2006), which show that most students reveal information in their Facebook profile such as their real name, date of birth, relationship status, and email address. Cohen and Eini's (2012) research shows that young people discern when to disclose information based on the type of information and its degree of privacy. They found that most students write the name of their school, their e-mail address, and sometimes partially their home address on their personal profile, but they do not write their cell phone number.

- 2 There is a certain amount of hurtful behaviour among teens on Facebook.

We hypothesise that the behaviour exists at a high level relative to the reports from surveys in other societies. Many media articles report harmful behaviour among teens, which has sometimes caused serious damage. This hypothesis is supported by surveys and studies such as the survey by the Israeli Teachers' Associate and the Geocartography Institute (Avger, 2014), which found that a sizeable number of teachers suffer from intentional targeting by students through the social network. Insults, curses and verbal abuse were directed at some of the teachers. The same survey also reported that teens, too, suffer from intentional targeting by other students on Facebook, but in lower numbers than teachers (Weisblay, 2011).

The hypothesis that there will be a larger percentage is based on the existence of a big digital gap between age groups (Ganayem et al., 2009), and a lack of educational guidance and awareness-raising by teachers and adults, in a way that is fitting for the era of social networks; this leaves adolescents' behaviour unchecked.

- 3 There is a correlation between amount of online communication and hurtful behaviour.

This hypothesis is based on research results published by Ganayem et al. (2011), showing that almost a third of teens communicates with strangers. Studies also show that social network users share personal details in order to expand their circle of friends on the site, based on what Lemesh et al. (2009) found that teens are more inclined to disclose their personal details and information than children. This may be

related to adolescents' inclination towards risk-taking and broadening their circle of personal acquaintances. Based on Carpenter (2012), extensive use of social networks may lead to hurtful and inhumane communication towards others.

4 The 'privacy paradox' phenomenon exists among Arab teens.

This statement is supported by various studies (Acquisti and Gross, 2006; Barnes, 2006; Norberg et al., 2007), which show that most users, including those concerned about privacy, do not change their profile's default privacy settings, and thus actually disclose personal information about themselves.

Barnes (2006) uses the term 'privacy paradox' to describe the gap between statements regarding privacy and the actual behaviour of social network users. Norberg et al. (2007) also reported empirical results showing that users disclose personal information in greater amounts, even when that opposes their assertions. Also, according to Cohen and Eini (2012), teens are indifferent about changing the default privacy settings for their Facebook profile.

4 Methodology

4.1 Research population

The study's population is Arab teens who have an active account and participate on the social network, Facebook. The participants are from middle schools and high schools, from different regions in Israel – the north, the centre and the south. The participants number 500, students ranging in age from 12 to 18 years, with the average age being 15.9 (N = 500; SD = 1.8). The sample includes both sexes, 48.4% (N = 242) males, and 51.6% (N = 258) females. Teens who participated in filling out the study questionnaire were chosen according to convenience, while all participants reported that they had an active Facebook account before receiving the questionnaire to fill out.

4.2 Research tools

This study used a questionnaire built by the researchers in order to collect the data from respondents on the research topics and hypotheses. The questionnaire was printed and distributed to groups of students and individuals from schools, according to convenience of access. The questionnaire included questions and statements relating to level of awareness about privacy, such as: "I ask for my friends' consent before I put pictures of them online" or "it bothers me that pictures of me are put up without my consent". The questionnaire also included questions and statements about actual behaviour in terms of privacy, such as: "indicate who can see the personal details on your profile: no one, friends only, friends and friends of friends, everyone, or I don't know", "which of your personal details did you enter in your personal profile?", or "have you participated in publicising things that were hurtful to other students". Some of the questions in the questionnaire were written in reversed language in order to confirm the reliability of the answer, something that was verified with reliability testing. Table 1 describes the results of the Cronbach's alpha reliability test.

Table 1 Cronbach's alpha test for reliability of the questionnaire, for questionnaire categories

<i>Item</i>	<i>Number of statements</i>	<i>Cronbach's alpha</i>
Habits of use and communication with others	14	.815
Attitudes about privacy and Facebook use	18	.845

4.3 Research procedure

The study's questionnaire was created based on previous questionnaires (Dwyer et al., 2007; Ross et al., 2009) that were used for the same purpose, with the addition of new questions. Besides demographic questions, the questionnaire included questions relating to students' views about privacy on the network, and questions intended to map the way in which students act and behave on the site in terms of privacy.

For the sake of validity, the questionnaire was assessed by three researchers connected to the field, who gave their comments; the questionnaire was then updated appropriately, and was given to 15 teens as a pilot. After filling out the questionnaires for the pilot, private conversations were held with seven of the pilot participants, who pointed out wording in a small number of questions that were ambiguous. After this, the questionnaire was appropriately updated and we decided to include some of the English terms that the teens are familiar with, in order to remove any uncertainty or confusion. For example, we added to the questionnaire words like 'like', 'poke' and 'profile' as part of the questions' wording, alongside the wording in Arabic. After the pilot, the questionnaires were passed on to the wider population of teens and the answers were entered into the SPSS program for statistical processing.

5 Results and discussion

5.1 Teens disclose different kinds of personal information in varying degrees

In answer to the question regarding 'who sees your personal details', around one third of respondents report that their personal profile is available for all to see (26.1%) or that they had no knowledge at all on the issue of privacy. At the same time, around half of respondents make their profile visible only to their Facebook friends. This result is similar to the one in the study by Cohen and Eini (2012) that found that most young people let only their friends view their timeline (or 'wall').

In answer to the question, "which personal details did you include in your profile and are they real or false?", the following results were received: 81.8% disclose their real first name, 79.8% disclosed real date of birth, 68.7% disclosed their real email, and 91.4% disclosed their true sex. It should be noted that 55.4% also write the real name of their school. Cohen and Eini's study (2012) also found that most of the participants include the name of their school and their email address in their profile. On the other hand, the results on details participants did not disclose or for which they used false information show that most of the participants are more careful when it comes to revealing: telephone number 86.1%, names of family members 69.2%, personal picture, 64.4%, address 58.6%. The results in Cohen and Eini's study (2012) were similar, showing that most young people do not write their phone numbers on the social network, Facebook, and that their residential address is sometimes written just partially.

In answer to questions concerning the frequency with which one uploads pictures, whether of family or from school, results showed that around 63% reported that they do not upload pictures of family, around 20% upload family pictures once a month or less, and around 18% upload at least one a week. On the other hand, much less than that, around 40% reported that they do not upload school pictures at all. This result diverges from Cohen and Eini's (2012) results, in which young people frequently upload pictures of themselves (89%) and pictures of family as the most infrequent within the category (67%). This result may have to do with Arab society being generally more conservative relative to other societies.

The overall picture in terms of disclosure of personal information is that most teens distinguish between different types of information. When the information is connected to school, there is greater disclosure relative to the amount of disclosure when it comes to family. Participants were most conservative about sharing information about their family. The protectiveness regarding family details has been found in other studies, as well (Cohen and Eini, 2012). Moreover, in terms of personal information, teens distinguished between different kinds of information; many disclosed their real name and date of birth, and few revealed their phone number or personal photos. From this it appears that most of the participants are inclined, on principle, to maintain their privacy and that of their family members.

Based on the above mentioned results, the hypothesis, that teens disclose different kinds of personal information in varying degrees, is accepted.

5.2 There is a certain amount of harmful behaviour among teens on Facebook

In response to the sentence, "Facebook causes me problems with other people" (on a 5-point scale), 14% reported that they agreed with the sentence while about half of respondents disagreed strongly with it. In terms of harmful behaviour directed at the respondents, "hurtful things were posted about me", results showed that around 10% suffered from hurtful behaviour at varying degrees. On the other hand, 20% were involved in hurtful behaviour towards others and around 24% towards teachers in varying degrees.

These study results are close to the results of the survey by the Israeli Teachers' Association and the Geocartography Institute (Avger, 2014). We see that the students report hurtful behaviour towards teachers (24%) in higher numbers than the teachers reported in the Teachers' Association survey (19% of those surveyed). There were similar results between the present study and the Teachers' Association survey in terms of the percentage of students reporting hurtful behaviour directed at them online (around 12% in the Teachers' Association survey and some 10% in the present study).

From all of these results we can estimate that about a quarter of the Facebook users are involved in harmful behaviour in one way or another; this should be an educational priority to be addressed, because it means that Facebook usage has a comprehensive and direct effect on what is happening within schools and in the classroom.

This hypothesis has been proven, in which certain amount of teens are involved in hurtful behaviour in Facebook.

5.3 *There is a correlation between amount of online communication and hurtful behaviour*

In this study, we looked at two kinds of communication: frequency of communication, i.e. number of weekly hours using Facebook, and frequency of communication with strangers.

In terms of frequency of communicating with strangers on Facebook (on a 6-point scale), we found that over a third (36.6%) communicate with strangers with some frequency, at least once a month. Among them, 16.3% do so weekly and 6.4% do so daily.

These results are in line with results from Lemesh et al.'s (2009) study conducted in Israel, in which a third of children were found to communicate with strangers through instant messaging. According to that same study, most of older children in middle school and high school communicate with strangers. The results of the present study and that of Lemesh et al. (2009) are significantly higher than those appearing in the study of Hampton et al. (2011) in which, on average, only 7% of a user's friends are strangers, and most of a user's Facebook friends are based on previous acquaintance from an academic institution, work, or family.

A significant correlation, though weak, was found between the amount of communication with strangers and:

- A significant correlation was also found between the number of hours of Facebook use (average number of weekly hours of Facebook use) and involvement in hurtful behaviour towards students on the site ($r_p = 0.13$, $p < .01$). Hurtful behaviour directed at the survey respondents ($r_p = 0.133$, $p < .005$).
- Respondents' participation in hurtful behaviour towards other students ($r_p = 0.25$, $p < .005$).
- Respondents' participation in hurtful writing about teachers ($r_p = 0.133$, $p < .005$).

Although we do not know of other studies reporting a numerical correlation as we have reported here, this result, pointing to a significant correlation between the amount of communication with strangers or numbers of hours of Facebook use with the amount of involvement in hurtful behaviour towards others, is a result that perhaps justifies what Carpenter (2012) reported; that study reported that the extensive and frequent use of social networks effects online conversation, and effects users' daily life in such a way that it may lead to hurtful and inhumane communication towards others.

Also this hypothesis was supported by the results of this study.

5.4 *The phenomenon of 'the privacy paradox' exists among Arab teens*

The level of awareness about privacy was found to be relatively high, with a 4.11 average on a 5-point scale, in respondents' answer to the question, "I have awareness around privacy while using Facebook". Around 80% reported that they have a high to very high level of awareness. On the other hand, in answer to the question, "How much do you change the privacy settings", around 77% reported that they do not change their profile's default privacy settings at all, or only very infrequently. This indicates an insufficient level of awareness similar to results from other studies in which respondents also refrained from adjusting privacy settings (Gross and Acquisti, 2005), added 'friends'

without knowing who they are, and publicised personal identifying details on one's profile such as birth date and school name (Gross and Acquisti, 2005; Lampe et al., 2006). In the present study, as well, most participants were found to disclose real information about them including date of birth, name, sex, and email address. Cohen and Eini's study (2012) showed that teens do not appear to be aware of dangers on Facebook, but most are inclined to protect their privacy, on principle.

These results show that, on the one hand, most participants reported that they have awareness around the issue of privacy, and on the other hand, most also stated that they do not change their default privacy settings. This indicates a gap between the inclination and statements to protect one's privacy and actual behaviour. This behaviour supports the existence of a certain degree of the privacy paradox among the participants, which is likely to express itself in various interactions on the site. This reality may be related to participants lacking a sufficient understanding of the consequences of disclosure and that neglecting their privacy can sometimes be harmful to them. The hypothesis about 'the privacy paradox' among Arab teens in Facebook was also proven.

6 Summary and conclusions

In Israel's Arab society, most homes are connected to the internet, with teens using the internet from home, whether on a home computer or using their mobile phones. This situation presents parents with the decision if and how they should influence what is going on with teens in the internet environment. This in turn leads to the question of whether parents are aware of the results and dangers of not influencing or being involved in what is happening in their children's digital world. Most studies show that there is a big gap between digital knowledge and literacy of Arab teens and that of their parents. This makes it difficult for parents, on the one hand, to understand the consequences of poor online behaviour and, on the other hand, distances them from being central in their ability to influence their children's behaviour, and thus minimises their ability to supervise the goings on online.

As mentioned, this study's main objective was to examine both the attitudes of Arab teens in Israel regarding privacy and their actual patterns of use in terms of privacy on the social network, Facebook. The study was based on a broad questionnaire, distributed to 500 teens from different areas in Israel, with the average age being 15.9 years.

Results from the present study show that most participants disclose real, personal details on their profile, such as date of birth, name, school name, sex and e-mail address. At the same time, they are less likely to publicise details related to names of family members, home address, and they upload personal and family photos less often; this seems to come from the relatively conservative nature of Arab society when compared with other Western societies.

This study also demonstrates that most participants, in terms of their statements, are aware of the issue of privacy on Facebook and that protecting privacy is important to them. On the other hand, in terms of actual use and behaviour, they do not protect their own privacy as they claim – most not changing the default privacy settings. One can conclude from here that, to a certain degree, a privacy paradox exists in this context.

As far as we know, this study is the first of its kind in Arab society in Israel and it can contribute to understanding the issue of privacy among Arab teens on social networks.

The study's results can help educators and parents better understand the behaviour of teens in the digital world, in order to help teens use the internet, and specifically social networks, in a wiser manner, and to have digital literacy when it comes to internet privacy.

Digital literacy and experience with the internet alongside awareness of the dangers related to neglecting online privacy can lead to better literacy regarding online privacy, and thus lead to informed and prudent behaviour when it comes to online privacy.

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