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AWARENESS OF ESAFETY AND POTENTIAL ONLINE DANGERS AMONG CHILDREN AND TEENAGERS

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ABSTRACT

Aim/Purpose	Awareness of eSafety and potential online dangers for children and teenagers.
Background	The study examined eSafety among children and teenagers from their own perspectives, through evaluations of their awareness level of eSafety and of potential online dangers.
Methodology	This is a mixed-method study with both quantitative and qualitative elements. The study includes questionnaires and interviews. A total of 345 participants from Israel completed questionnaires; 90 children and teenagers were interviewed from among the participants.
Contribution	The study examined the awareness of children and youths of safe online surfing. It also examined the degree of exposure of children and youths to positive and negative aspects of the Internet. This study illustrates the dual potential of Internet use within the context of eSafety, as seen through the eyes of children and teenagers. Characteristics of use of the Internet are liable to increase the danger to and the bullying of youths and by youths in the digital domain. It also demonstrates the promises of using the Internet for productive learning and leisure activities.
Findings	Findings show that the children and teenagers who participated in the study reported a medium-high level of awareness. Issues that participants were concerned about included avoiding contact with strangers and cyberbullying, not necessarily by strangers, but also by friends.
Recommendations for Practitioners	It is important to examine how children perceive online events for the purpose of examining their statements regarding eSafety and the way they view problematic or dangerous online events, as well as how they believe they can cope with them.
Recommendation for Researchers	The study recommends incorporating in future studies individual case studies and allowing participants to express how they perceive complex online situations.

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Impact on Society	This study illustrates the dual potential, positive and negative aspects, of Internet use within the context of eSafety, as seen through the eyes of children and teenagers.
Future Research	Future studies should track changing eSafety awareness and behavior longitudinally to identify the impact of maturation and experience on their behavior and attitudes.
Keywords	Internet, children, teenagers, eSafety, cyberbullying

INTRODUCTION

Several studies have found that children are exposed to a tremendous amount of information and that the Internet in general, and social media in particular, occupy an ever-growing role in their lives (Byron, 2008; Edwards et al., , 2016; Ito et al, 2009; Livingstone, Haddon & Görzig 2012; Livingstone, Haddon, Görzig, & Ólafsson, 2011; Livingstone, Mascheroni, Ólafsson, & Haddon, 2014; Livingstone, & Sefton-Green, 2016; Ofcom, 2010; Taylor & Kitter, 2010; Zilka, 2014, 2016a, 2017). The Internet is a super-medium comprised of both modern and conventional media, offering a vast array of interactive possibilities. Internet users are differentiated by their capacity to understand, analyze, appraise, create, and distribute content; successfully make use of communication, information, and media technologies; identify and cope with harmful content; and make use of the Internet for democratic and humanistic purposes, and for individual as well as communal purposes (Livingstone et al., 2012; McGonagle, 2011; Van Dijk, 2006; Zilka, 2016b).

Safety has become a major issue and relates to a range of activities including online privacy, cyberbullying, exposure to violent content, exposure to content that foments exclusion and hatred, contact with strangers online, and coarse language. Cyberbullying is defined as an activity aimed at harming another person by means of verbal or visual messages, using video, audio, and software programs (Federal Communication Commission, 2009; Livingstone & Görzig, 2014; Livingstone, & Smith, 2014; Ringrose, Harvey, Gill, & Livingstone, 2013). The common forms are harassment, flaming, denigration, impersonation, outing, trickery, exclusion, cyber stalking, cyber threats, the spreading of viruses, attacks against websites, breaking into computers, and more (Federal Communication Commission, 2009; Livingstone & Görzig, 2014; Livingstone, & Smith, 2014; Ringrose et al., 2013).

This study examined eSafety among children and teenagers as seen from their own perspective and evaluated their awareness level of eSafety and potential online dangers. eSafety is defined as awareness of the potential dangers of using the Internet by children and teenagers. eSafety awareness relates to online privacy, exposure to violent content, the degree to which they either refrain or make contact with strangers online, the degree to which they feel they require tools to help them cope with online dangers, and the degree to which they define themselves as "prudent Internet users". This study illustrates the dual potential of Internet use for good or harm, within the context of eSafety, as seen through the eyes of children and teenagers.

THE POTENTIAL OF THE INTERNET FOR CHILDREN AND TEENAGERS: RISKS AND REWARDS

A large-scale study of eSafety, conducted by Lansdown, Akullo, Carr, Hecht, & Palmer (2011) on behalf of the United Nations Children's Fund (UNICEF), found that many countries in Africa, Asia, and elsewhere have no access to the Internet. Only about one billion of the six billion people who live on the planet have access to the Internet. Internet access has the potential to shatter the boundaries of time and place in the dissemination of information and enable a variety of communication options. Lack of access to the Internet has the potential to increase existing gaps and reduce equality

of opportunity. It is therefore important to encourage access to the Internet and to deal with eSafety issues through education that promotes safe surfing.

A number of studies on the use of the Internet and social media by children and teenagers found that these mediums enhance the ability of children to communicate with others and foster a sense of social belonging and connectivity. They also make possible experiences of close friendships and social acceptance. Writing makes it possible to convey one's message without others interrupting the flow, unlike face-to-face talking, in which others can break the flow of speech. The writer can concentrate on writing rather than being hampered by distracting issues such as stuttering or body language. Writing is often similar to "internal talk" and enables the expression of feelings, compensating for difficulties in face-to-face communication. It provides the option to edit the text and use different representations, such as emoticons. Writing can have a therapeutic value, contributing to emotional relief, the airing of emotions, and the release of stress. Positive online interactions promote a sense of self-value and determination, afford feelings of meaningful contribution to the community, and provide opportunities to display talents and abilities and to receive feedback from others. At the same time, children and teenagers are exposed to a large amount of media and must cope with increasingly complex situations (Clark, 2013; Duerager & Livingstone, 2012; Lansdown et al., 2011; Lim, 2016; Livingstone, 2015; Zilka, 2014, 2016a).

On the Internet, young people operate in an environment that offers a sense of invisibility. This makes it easier to hurt someone on the Internet than in person. This sense of anonymity and invisibility enables the surfer to invent a new personality that may result in a blurring of boundaries and irresponsible behavior. Lack of eye contact, of facial expressions and body language, reduce embarrassment and timidity. Individuals who are insecure in face-to-face communication may feel more confident in a virtual connection that allows them to shed their inhibitions and perform deeds that they would not carry out in a face-to-face environment. Frequent, long usage, without supervision or clear limits, might promote unacceptable behavior in those not usually considered problematic (Annansingh, & Veli, 2016; Livingstone 2013; Livingstone et al., 2012; Livingstone, & Smith, 2014).

A number of studies show that children and teenagers have a need for belonging, companionship, closeness, acceptance, openness, to be "heard" and receive help on the Internet and social media (Bonanno & Hymel, 2013; Clark, 2013; Duerager & Livingstone, 2012; Lim, 2016; Livingstone, 2013; Livingstone & Bober, 2005; Nosko, Wood, & Molema, 2010; Ofcom, 2010, 2016; Taylor & Kitter, 2010; Zilka, 2014, 2016b). Many children and teenagers also reported engaging in negative behaviours, such as slandering someone on social media, uploading embarrassing photos, providing URLs to embarrassing videos, superimposing the image of a friend on a preexisting video, snubbing a friend and spreading malicious rumors (Mason, 2008; Patchin & Hinduja 2006). Children and teenagers spoke of how their feelings regarding exposure online have changed, phrases such as "I've got used to being exposed" were repeated again and again, as if there were no choice, because these are "the rules of the game." They complained about the ease with which they were snubbed, humiliated, or offended (Agosto, & Abbas, 2015; Bonanno & Hymel, 2013; Clark, 2013; Duerager & Livingstone, 2012; Lim, 2016; Livingstone, 2013; Livingstone & Bober, 2005; Livingstone, Marsh, Plowman, Ottovordemgentschenfelde, & Fletcher-Watson, 2015; Nosko et al., 2010; Ofcom, 2010, 2016; Taylor & Kitter, 2010; Zilka, 2014, 2016b).

Respondents also reported that social media makes them feel more socially confident and allows them to stay informed with what is happening. They stated that their need for belonging is met online, but that the lack of clues that are inherent in face-to-face interactions, such as facial expressions and body language, are missing and this leads to miscommunication, messages being misinterpreted or misconstrued and, at times, leading to conflict. Something that is said face-to-face with a smile may be understood in an entirely different way than if posted on someone's Facebook Timeline (Zilka, 2016b).

DANGERS RESULTING FROM THE USE OF THE INTERNET BY CHILDREN AND TEENAGERS

The open structure of the Internet, coupled with the lack of ability to fully control its content by means of technological solutions involving filtering and blocking, and the difficulty in supervising such an open environment because of the constraints imposed by free speech regulation and legislation, increase the risk of children being exposed to potential dangers that may cause them harm while using the Internet (Byron, 2008; Livingstone & Bober, 2005; Livingstone & Das, 2010; Livingstone et al., 2012; Livingstone & Smith, 2014; Ofcom, 2010, 2016; Taylor & Kitter, 2010; Zilka, 2014,2016a). Cyberbullying is a major source of such harm and can involve both verbal and visual messages. Common examples are harassment; offensive messages (curses, insults, threats); flaming (the exchange of offensive, blunt, and insulting words); denigration (spreading false stories and information to harm the victim's social relationships); identity theft and impersonation (use the victims' personal details, such as user name and password, to impersonate them and carry out actions in their name, write lies about them, etc.); outing and trickery (revealing intimate and private information about another person, often obtained by deception); cyberstalking and cyberthreats (digital surveillance of individuals, collection of data about them, and publication of the collected information to harm or threaten them, etc.); exclusion and boycott (excluding a person from social activity, and more). Most victims of sexual abuse and harassment online are between the ages of 13-17. Attackers seek to entice adolescents who publish personal information on the Internet to reveal information about their sexuality (Wolak, Finkelhor, Mitchell, & Ybarra, 2008). Victims of cyberbullying are less likely to report abuse than those who have been victimized outside the Internet, as a result, parents and other adults are less likely to be aware that their children have been harmed (Heirman, & Walrave, 2008).

The list of potential dangers arising from the use of the Internet by children and teenagers is extensive and includes exposure to inappropriate content that features cyberbullying, coarse language, sexuality and/or violence; exposure to content that foments exclusion and hatred; exposure to inappropriate advertisements and/or viral and interactive content that blurs the boundaries between editorial and commercial content; contact with individuals engaging in sexual harassment, pedophilia, hate speech, fraud, and scams; privacy-related dangers arising from disclosure online of personal data and family information; exposure to content that may adversely affect health (such as weight gain, smoking, juvenile sexual relations and unwanted pregnancy, use of alcohol and drugs) (Federal Communication Commission, 2009; Livingstone & Görzig, 2014; Ringrose et al., 2013).

Researchers have described the experience of online victimization as traumatic and found that its negative effects are physical, cognitive, emotional, and social (Mason, 2008; Patchin & Hinduja, 2006). The areas most affected by online violence are scholastic performance and socio-emotional development. Scholastically, students who are victims of an anonymous attack and fear that the attacker is a friend or a classmate are distracted from learning and become unsettled when studying. It can cause a significant decrease in the ability to concentrate, a loss of motivation to study, low academic achievement, reluctance to go to school, and frequent absences (Beale & Hall 2007). Socio-emotionally these victims have difficulty defending themselves and so may change their behavior, withdraw, respond aggressively, or isolate themselves. Their feelings are characterized by distress (frustration, apathy, loneliness, sadness, depression, and anger), reduced self-esteem, and social withdrawal (Kowalski & Limber, 2007; Patchin & Hinduja, 2006).

An international study of 25 countries showed that different risks apply to different age groups (Livingstone et al., 2012). Risks related to privacy and exposure to inappropriate content apply particularly to children aged 8 to 12; risks related to contacting strangers affects teenagers aged 12 to 17. Risks affecting both children and teenagers include harassment, cyberbullying, identity theft, hate speech, incitement, and racism (Annansingh & Veli, 2016; Gasser, Maclay, & Palfrey, 2010; Law, Shapka, & Olson, 2010; Livingstone, Kirwil, Ponte, & Staksrud, 2014). The most vulnerable children are those

new to the Internet, teenagers actively seeking risks, and children and teenagers defined as at risk for reasons such as illness, death of a parent, behavioral problems, difficulties adapting, financial trouble, learning disabilities, cultural differences, immigration, belonging to a minority, other disabilities, changing schools, living in a problematic, dangerous or impoverished environment (Livingstone et al., 2012; Livingstone & Smith, 2014; Schilder, Brusselaers, & Bogaerts, 2016; Zilka, 2016a).

Concerned parents may try to restrict access to inappropriate sites, but this often results in a deterioration in the relationship between parents and child (Bickham & Rich, 2006; Leung, 2013; McQuail, 2010; Rideout, Foehr, & Roberts, 2010; Roberts, Foehr, & Rideout, 2005; Vandewater, Bickham, & Lee, 2006; West & Turner, 2007; Zilka, 2014). Research shows that when parents try remove or restrict computer access children see this as punishment, creating conflict between parents and child. Parents have reported arguments, relationship difficulties, and a rejection of alternatives by children (Evans, Jordan, & Horner, 2011). Limiting time online is difficult to implement and is not usually effective as children find other means to reach the sites they are interested in (Borzekowski & Robinson, 2007; Cottrell, Branstetter, Cottrell, Rishel, & Stanton, 2007).

THE PRESENT STUDY

The aim of the study was to examine eSafety awareness among children and teenagers. The study measured awareness of eSafety from the perspective of children and teenagers in the context of:

- Online privacy;
- The Internet as facilitating day-to-day life;
- Exposure to positive, useful, enriching, and productive content;
- Exposure to violent content;
- The degree to which they either refrain or make contact with strangers online;
- The degree to which they feel they require tools to help them cope with online dangers;
- The degree to which they define themselves as "prudent Internet users;"
- How they avoid online dangers—all with relation to differences in gender, age, socio-demographic background, and viewing habits.

METHODOLOGY

SAMPLE

The sample included 345 Israeli children and adolescents. The age range was 8-18, with a median of 15 (M = 14.41, SD = 2.86), and there were slightly more girls (52.4%) than boys. Participants were divided into two age groups: children (up to 8th grade or age 14; 46.2% of respondents), and adolescents – (9th-12th grade, 53.8% of respondents).

Most (80.1%) reported that their parents are married; the rest reported their parents' marital status as divorced (13.8%), separated (3.7%), or other (5.7%). As for domicile, 41.9% reported living in an apartment owned by their parents, 33.5% in a house owned by the parents, and 24.6% in a rented apartment. A little over half of participants (50.8%) reported their financial situation as average, 30.6% as above average, and 5% as significantly higher than average. Only 13.6% reported their financial situation as below average (among whom 3.7% described their financial situation as significantly below average).

Tools

This was a quantitative study with a qualitative element. The study included questionnaires and interviews. The purpose of the interviews was to identify eSafety awareness, the nature of children and teenagers' use of the Internet, and whether or not they felt a need for tools to cope with online dangers. A total of 90 children and teenagers were interviewed. The questionnaires were based on those of Ofcom – Office of Communications (2010), Livingstone et al. (2012), Livingstone and Bober, (2005), and Livingstone (2013). These were translated into Hebrew, the language spoken by the respondents.

The research tools are described below.

Questionnaires

Viewing Habits: The respondents were asked nine questions about the number of hours a day they spent using, watching, or browsing TV, DVD, VCR , VOD, YouTube, computer, tablet, internet, radio, newspaper, smartphone and answered using a point scale (0 – not at all, 1 – less than an hour, 2 – one hour, 3 - two hours, 4 - three hours, 5 - four hours, 6 – five hours, 7 - six hours or more).

eSafety awareness was measured with 10 questions. Seven of these were closed and measured the extent of their activities, for example, "To what extent are you aware of your privacy level online?" The three open questions were: "Please give an example of prudent Internet use." "What are the dangers associated with using the Internet in your opinion?" and "How do you think these dangers may be avoided?"

Interviews

The semi-structured interviews covered viewing habits and questions about eSafety. The order of questions was determined by the dynamics of the interview.

Statistical Analysis

An exploratory factor analysis was conducted, with a Varimax variance rotation. This procedure was conducted in order to reduce the data to a smaller number of components that can be used in further analysis. In this case the ten items were reduced to a two central components that where more easily used in further analyses. A linear regression analysis was performed to identify which variables influence the eSafety awareness. To examine the significance of the associations between eSafety awareness, participants' viewing and reading habits, computer literacy and the number of digital devise found in their homes (that is, between each pair) we used Pearson correlation analyses. T-test analyses were conducted to compare the positive vs negative online content.

Qualitative analysis. Participants were asked to answer three open questions regarding eSafety, We analyzed qualitatively the free-text answers. The analysis identified the principal themes in the children's answers.

Study Procedure

After receiving consent, questionnaires were handed to children and teenagers who completed them in the presence of a researcher. Later, the two groups, one aged up to 14 and the other from the between 14 to 18, were interviewed.

Results

Viewing Habits

Participants were asked to note the degree to which they consume various communication media. Descriptive analyses appear in Table 1.

Table 1:.Children and Adolescents' Viewing Habits (average hours per day)

	N	*M*	SD
Browsing the internet	332	3.1	2.0
TV	341	2.1	1.7
Watching TV content via the computer	335	1.6	1.8
YouTube	336	1.6	1.5
Browsing on a tablet	335	0.8	1.4
Watching a DVD	335	0.5	1.2
Reading a book	334	0.8	1.1
Reading a newspaper	333	0.3	0.6

eSafety Awareness

Participants were asked to report the degree to which they are aware of various eSafety aspects, as shown in Table 2. Participants' answers were rated on a 5-point scale ranging from 0, representing a very low level of awareness ("not at all") to 4, representing a very high level of awareness ("very much"). Results from the exploratory factor analysis, using Varimax variance rotation. Two factors together explained 59.7% of the common variance. Below is a description of the results of the analysis, and the reliability of the variables.

The first aspect of eSafety awareness, awareness of the elements of prudent Internet use, concerns practical aspects of Internet use, both in the positive sense ("to what extent were you exposed to positive, useful, enriching, and productive content") and the negative one ("to what extent do you avoid contacting strangers online"). Averaging the perspectives of participants with respect to this aspect produced an average of M=3.01 (SD=0.81), indicating a high level of awareness. A Cronbach's α of 0.829 indicates high internal consistency of the items.

Table 2. eSafety awareness: Results of factor analysis using Varimax variance rotation

		M Statements	*SD*	Factor loading	Cronbach's α
Awareness of the elements of prudent Internet use	To what extent are you aware of your privacy level	3.16		.682	0.784
	To what extent does using the Internet make your day-to-day life easier	3.22		.703	
	To what extent are you exposed to positive, useful, enriching, and productive content online	3.15		.846	
	To what extent are you exposed to violent content online	2.52		.584	
	To what extent do you avoid contacting strangers online	2.82		.604	
	To what extent do you define yourself as a "prudent Internet user"	3.17		.714	
	Average of awareness of the elements of prudent Internet use	3.01	0.81		

		M State-ments	*SD*	Factor loading	Cronbach's α
The need to consult the environment	To what extent do you consult your parents about online dangers	1.80		.905	0.878
	To what extent do you consult family members about coping with online dangers	1.71		.920	
	To what extent do you consult friends about online dangers	1.83		.793	
	To what extent do you feel you need tools to cope with online dangers	1.62		.734	
	Average of the need to consult the environment	1.74	1.29		
General eSafety awareness (total score across subscales)		2.51	0.82		0.829

Analysis of the three open questions regarding eSafety identified a number of themes. The first qualitative question asked respondents to provide an example of prudent Internet use. Two hundred and two participants answered the question, and after a qualitative analysis their answers were grouped into six categories, with some of the answers falling under several categories, so that the total percentage was more than 100%, as shown in Figure 1.

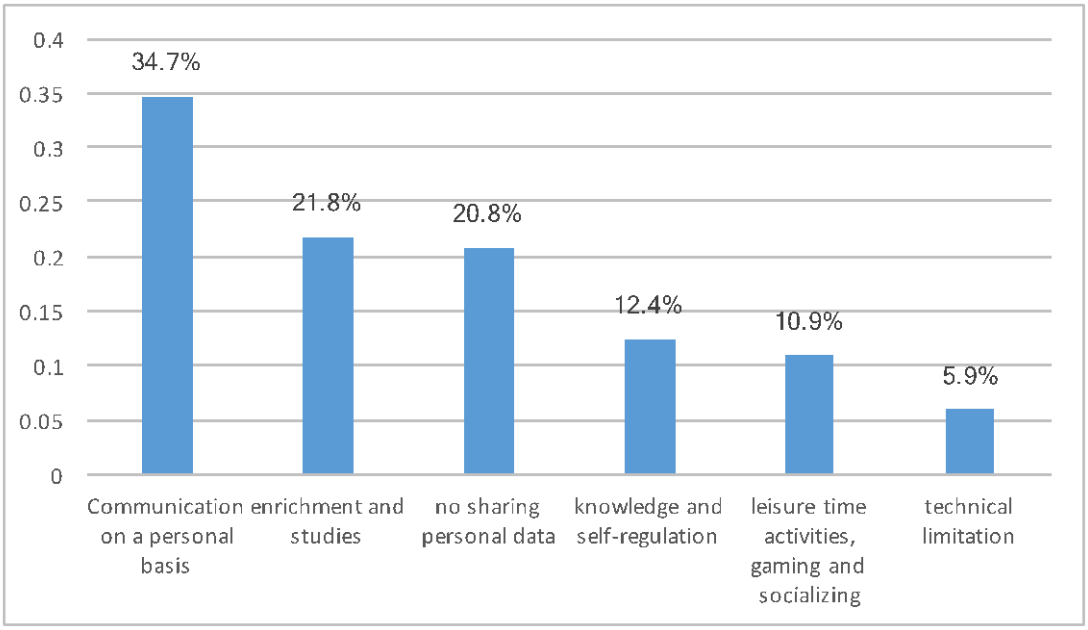

Figure 1. Results of the qualitative analysis of respondents' answers (N=202)
Examples of Prudent Internet Use

The most prominent aspect of prudent Internet use from the analysis is communication only on the basis of familiarity (e.g., "I approve only people I know" or "On websites like Instagram and Facebook, my posts are visible only to friends"). This constitutes an expansion of the old parental admonition "do not speak to strangers," but within the online milieu. Of respondents who answered

this question, 34.7% reported being in agreement with this aspect. Furthermore, 20.8% of respondents reported that prudent Internet use concerns maintaining privacy, specifically, avoiding disclosure of personal data (e.g. "I don't give away personal details or information about my family").

Another aspect of prudent Internet use reported by respondents (12.4%) pertained to self-imposed limitations while surfing (e.g., "Not to go to forbidden websites" or "Avoid inappropriate websites"), and also to surfing and computer literacy ("Not to download files without knowing what they do"). While this aspect pertained to the "do not" category, 5.9% of respondents reported further technical aspects in the "to do" category, such as "Make sure that my settings protect my privacy" and "Install an antivirus."

Apart from these, two additional aspects of prudent Internet use were reported. The first one was the use of the Internet only for study and learning purposes (e.g., "I use the Internet to learn a lot of things like how to play an instrument, or paint better, or for learning languages or to study in general," and "The Internet helps us find information about things we want to know, and also helps in doing homework"). In total, 21.8% of respondents reported this aspect.

In the second qualitative question, respondents were asked to address potential online dangers. Analysis of the answers of 201 participants showed four central aspects, as shown in Figure 2.

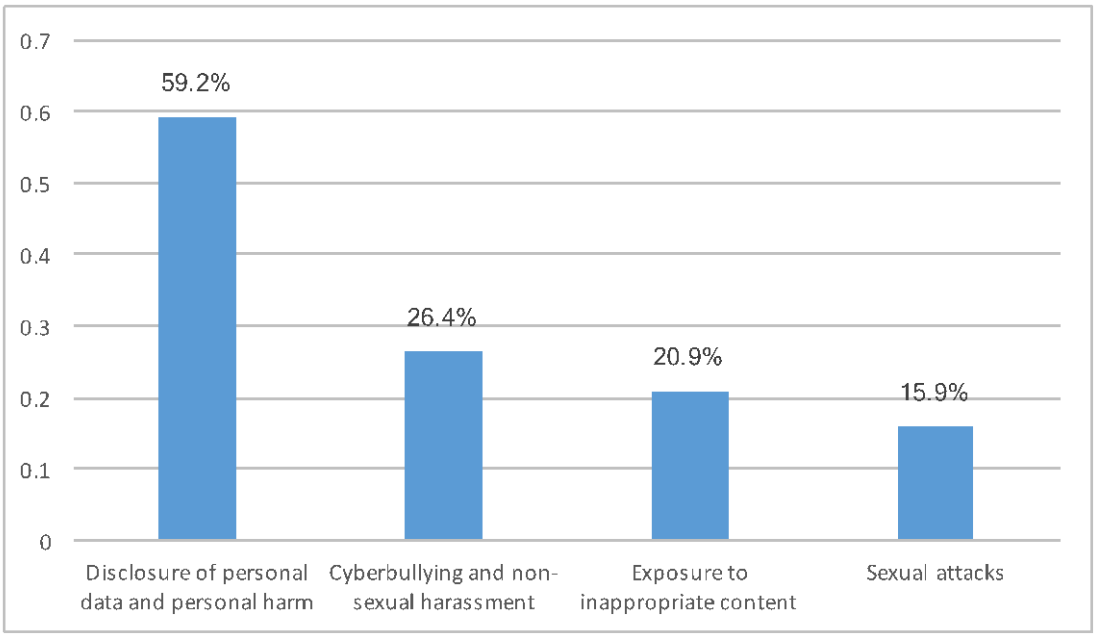

Figure 2: Results of the qualitative analysis (N=201) of answers regarding online dangers

The most common aspect of prudent Internet use reported by respondents (59.2%) related to the danger of disclosure of personal data (e.g., "Posting personal data that could get to the wrong people"), and how such a disclosure could cause harm (e.g., "If they know where I live, they can break in" or "identity theft" or "online scamming"). About a quarter of respondents (26.4%) reported that online dangers consisted of cyberbullying and violence (e.g., "exposure to violent content and communicating with strangers"), and, more significantly, exposure to "harassments and attacks." Several respondents (15.9%) reported non-sexual violence as an online danger. Respondents (20.9%) also distinguished between dangers associated with exposure to individuals who may attack them sexually ("pedophiles"), and accidental exposure to content that does not agree with their values (i.e., addiction) or their age (i.e., pornography or intense violence).

The third qualitative question asked participants to report how they may avoid online dangers. Analysis of 185 respondents' answers showed five main aspects, as detailed in Figure 3.

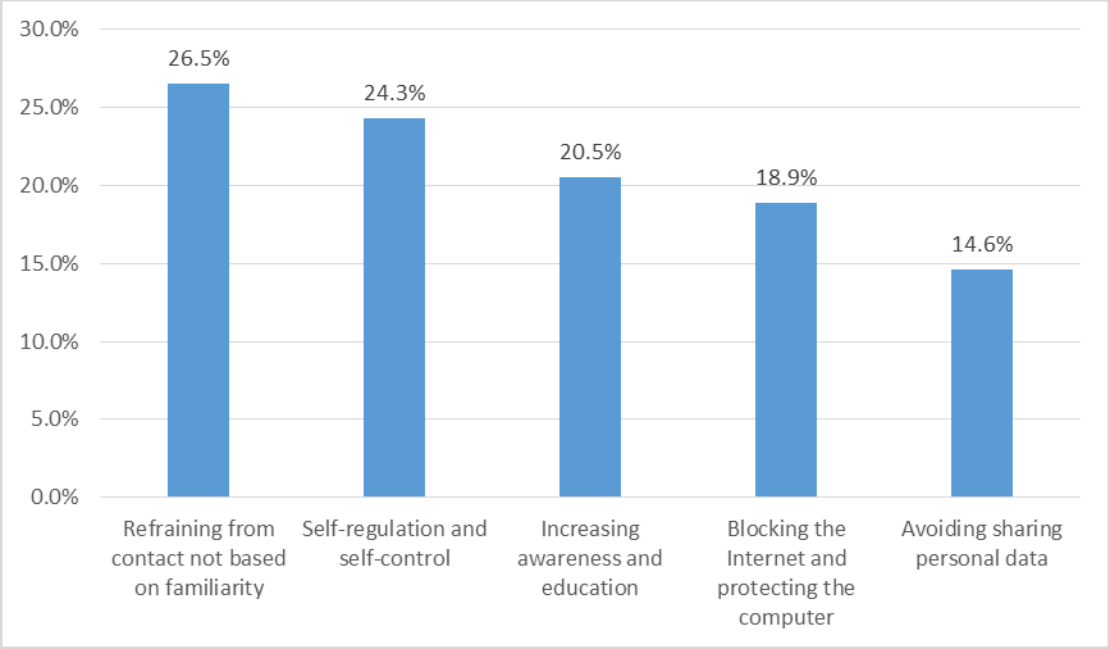

Figure 3. Results of the qualitative analysis of the answers (N=185) about preventing online dangers

A little over a quarter (26.5%) of respondents reported refraining from making contact with anyone they did not know personally (e.g., "Don't talk to anyone you don't know, don't disclose your personal data on websites"). In addition, 14.6% of respondents reported that disclosure of personal data should be avoided; they also mentioned the need to use judgment when entering data on websites (e.g., "Don't enter bank account details or credit card details" or "Think twice before uploading anything, whether it's an image or anything else"). Another aspect that several respondents reported (24.3%) involved responsible conduct online, namely, taking preventative measures, such as installing antivirus and other software that promotes online safety. Respondents also reported that it is the responsibility of the user to ensure online safety and to use common sense, e.g., "Don't talk to strangers online and try to limit the time you spend every day on the computer," and in general "be smart." An additional 18.9% of respondents reported specific measures such as blocking hazardous websites and protecting the computer used to access the Internet.

Correlation between eSafety awareness, viewing habits, computer literacy, and the number of digital devices in the house

Results of the analysis of the correlation coefficients of eSafety awareness, participants' viewing and reading habits, computer literacy, and the number of digital devices found in their homes, are shown in Table 3.

Table 3. Correlation between the coefficients of degree of eSafety awareness, participants' viewing and reading habits, computer literacy, and the number of digital devices found in their homes

eSafety Awareness		Digital media consumption	Reading habits	Computer literacy	Number of digital devices in the house
eSafety awareness		.201**	.020	.426**	.171**
Practical elements of Internet use		.148*	-.079	.540**	.346**
The need to consult the environment		.180**	.118	.165**	-.055
Prudent Internet use	Communication on the basis of familiarity	.071	-.026	.077	.247**
	Avoiding sharing personal data	-.033	-.095	.077	.195**
	Knowledge and self-regulation	.115*	-.052	-.026	.169**
	Enrichment and studies	-.061	.094	.089	.171**
	Technical limitation	-.042	.092	-.034	.079
	Gaming, leisure time activities and socializing	.026	.070	-.031	.110*
Online dangers	Disclosure of personal data and personal harm	.021	-.010	.158*	.373**
	Sexual attacks	-.042	.030	.166**	.238**
	Cyberbullying and non-sexual attacks	.063	-.039	-.010	.229**
	Exposure to inappropriate content	-.092	.092	-.059	.182**
Avoiding online dangers	Avoiding contact not based on personal familiarity	.123*	-.020	.049	.229**
	Avoiding disclosure of personal data	.006	-.026	.022	.120*
	Blocking the Internet and protecting the computer	-.113*	.103	.062	.141**
	Self-regulation and self-control	-.043	-.013	-.043	.223**
	Increasing awareness and education	-.038	-.033	.076	.172**

**$p<0.01$, *$p<0.05$

In general, the analysis revealed a significant and positive correlation between eSafety awareness and digital media consumption ($r=.201$, $p<.01$), computer literacy ($r=.426$, $p<.01$), and the number of digital devices in the house ($r=.171$, $p<.01$). No clear correlation was found between reading habits and eSafety awareness. Similar results emerged from an analysis of the correlation between awareness of practical aspects of Internet use, the extent of digital media consumption ($r=.148$, $p<.05$), computer literacy ($r=.540$, $p<.01$), and the number of digital devices in the house ($r=.346$, $p<.01$).

No clear correlation was found between the number of hours spent reading and the level of awareness regarding practical aspects of Internet use in this context. Furthermore, no clear correlation was found between awareness of prudent Internet use and the extent of digital media consumption, reading habits, and computer literacy, apart from a clear and positive correlation between understanding the importance of knowledge and self-regulation during Internet use and the extent of digital media consumption ($r=.115$, $p<.05$).

We also analyzed correlation coefficients of degree of eSafety awareness with relation to participants' personal data. The results are shown in Table 4.

Table 4. eSafety awareness by participants' background characteristics

Participants' Personal Data			eSafety awareness	Awareness of practical aspects of Internet use	The need to consult the environment
Gender	Boy	A	2.47	2.91	1.80
	Girl	B	2.57	3.14*	1.70
Grade	Through 8th grade	A	2.51	2.80	2.06**
	9th to 12th	B	2.55	3.20*	1.57
Immigrant	No	A	2.49	3.01	1.69
	Yes	B	2.60	3.02	1.94
Parents' marital status	Married	A	2.57	3.11	1.76
	Other	B	2.52	2.95	1.83
Type of home	Private house	A	2.48	3.02	1.64
	Family-owned apartment	B	2.58	3.04	1.88
	Rented apartment	C	2.61	3.11	1.86
Financial situation	Significantly below average	A	2.70	2.86	2.46
	Below average	B	2.25	2.88	1.30
	Average	C	2.56	3.05	1.81
	Above average	D	2.58	3.17	1.67
	Significantly above average	E	2.61	2.93	2.14

**$p<0.01$, *$p<0.05$

The analysis shows that no differences exist regarding participants' general eSafety awareness in relation to background characteristics. But findings indicate gender-related differences regarding awareness of practical aspects of Internet use: the awareness level of girls ($M=3.14$) was higher than that of boys ($M=2.91$).

Results also showed age-related differences. First, regarding the practical aspects of Internet use, the study found that the awareness levels of older participants ($M=3.20$) was higher than that of younger

ones (M=2.80). With regard to the need to consult with the environment, it was found that this need was more important for younger participants (M=2.06) than for older ones (M=1.57).

Analysis of participants' insights regarding prudent Internet use, online danger awareness, and avoiding online dangers, in relation to background characteristics, showed that more boys (M=.14) mentioned knowledge and self-regulation than did girls (M=0.5), and that more boys than girls mentioned the use of the Internet for gaming and leisure time activities (M=.12 and M=.05, respectively). Similarly, with regard to understanding online dangers, it was found that more boys (M=.50) mentioned the potential risk of disclosure of personal data online than did girls (M=.38), whereas more girls (M=.26) than boys (M=.13) mentioned cyberbullying and non-sexual harassment. No gender-related differences were found with regard to understanding how to avoid dangers online.

Exposure to Both Positive and Negative Online Content

Two statements of special interest regarding eSafety relate to exposure to both positive ("To what extent have you been exposed to positive, useful, enriching, and productive content?") and negative ("To what extent have you been exposed to violent content?") content online. Analysis of respondents' answers by gender and age-group regarding these statements is shown in Table 5:

Table 5. Exposure to positive and negative content online by gender and age, T-Test analysis

			Positive (To what extend have you been exposed to positive, useful, enriching, and productive content?)	Negative (To what extent have you been exposed to violent content?)
Entire sample			3.15	2.52
Gender	Boy	A	3.02	3.02
	Girl	B	**3.31***	2.65
Grade	Through 8th	A	2.83	**2.09**
	9th to 12th	B	**3.42***	2.85*
Gender and grade	Boys – through 8th	A	2.84	**2.11**
	Boys – 9th to 12th	B	3.21	2.80*
	Girls – through 8th	C	2.93	2.22
	Girls – 9th to 12th	D	**3.55****	2.84*

**p<0.01, *p<0.05

Exposure to positive content and negative content

To compare the exposure to positive vs. negative online content in the form of violence, t-test analyses were conducted. Most respondents reported a medium-low level (in relation to the scale) of exposure to negative content online (M=1.48). Analysis did not reveal any differences between boys and girls. By contrast, it was found that respondents in the the older age group (M = 2.85) were exposed to negative online content to a greater extent ($t_{(184)}$=4.406, p<.01) than respondents in the youngest age group (M = 2.09). Combined analysis of differences with relation to gender and age group shows that younger boys (M=1.89) were significantly more exposed to negative content online

than were older boys (M=1.20) and older girls (M=1.16). No significant differences were found between younger boys and younger girls, or between older boys and older girls.

Results of Scheffe's *post hoc* analysis is done after an ANOVA. The results of differences in gender and age group, with regard to exposure to negative content, shows that older boys (M = 2.80) were exposed to negative content significantly more (t_{112} = 2.810, p <.01) than were younger boys (M = 2.11), but also that older girls (M = 2.84) were exposed significantly more ($t_{(103)}$ = 3.386, p <0.01) than younger boys (M = 2.11). At the same time, no significant differences were found between boys and girls in the younger age group and between boys and girls in the older age group.

DISCUSSION AND CONCLUSION

The aim of the present study was to examine eSafety awareness among children and teenagers. For the purpose of the analysis, 345 participants were divided into two age groups: a younger group comprising children through age 14 or through 8th grade (46.2%) and an older group comprising teenagers from 9th to 12th grade (53.8%). This was a quantitative mixed-method with a qualitative element. Ninety children and teenagers were interviewed, with an equal distribution between the age and gender groups.

The study examined eSafety, or awareness of safe Internet use and online dangers, among children and teenagers from their own perspective and evaluation of their eSafety awareness. The study also evaluated their level of awareness of online privacy; the degree to which the Internet facilitates their day-to-day life; the degree of exposure to positive, useful, enriching, and productive content; the degree of exposure to violent content; the degree to which they contact or avoid making contact with strangers online; the degree to which they believe they require tools for coping with online risks; the degree to which they define themselves as prudent Internet users, and how they feel online dangers can be avoided – all with relation to differences in gender, age, and socio-demographic characteristics, and viewing habits.

eSAFETY AWARENESS OF CHILDREN AND TEENAGERS

Participants were asked to report the degree to which they are aware of the various aspects that make up eSafety. The first aspect of eSafety pertained to the practical aspects of Internet use, both positive and negative. Findings showed that children and teenagers reported a high level of awareness. Participants were asked to answer three open questions with respect to eSafety. The first question asked participants to furnish an example for prudent Internet use. The most prominent aspect for prudent Internet use was communication on the basis of personal familiarity only. In general, this can be seen as an extension to the online environment of parents' familiar admonition of not speaking to strangers. Positive aspect pertained to the use of the Internet for gaming, socializing, and leisure time activities.

The second qualitative question that participants were asked to address concerned online dangers. The most common aspect reported by respondents concerned the danger arising from disclosure of personal data and the potential use of such information to cause personal harm to the user. Close to 26% of respondents reported that online dangers consisted of bullying and violence, mainly by exposure to "harassment and attack." Sixteen percent of respondents reported violence that is not necessarily sexual as an online danger. Respondents also distinguished between dangers associated with exposure to individuals or organizations that could attack them sexually and dangers associated with unintentional exposure to content inappropriate to their age or beliefs, such as pornography or extreme violence. Thirty percent of respondents reported these as online dangers.

A comparison of the findings of this study with similar, earlier studies (Gasser et al., 2010; Law et al., 2010; Livingstone, Kirwil, et al., 2014) reveals that issues of concern to children and teenagers are avoiding contact with strangers and cyberbullying, not necessarily by strangers but by friends.

In the interviews, 68% of the children said that whenever they are about to log into a social network, they "miss a beat;" they are afraid to find out that something embarrassing has been written about them, or that a close friend posted an embarrassing picture of them. One of the youths said in an interview: "When I was in school, children took my smartphone from my bag without permission, and wrote on my wall a supposed confession on my part of something I've never done." A girl said: "Children took my smartphone, got into my Whatsapp, and wrote offensive messages from me; it caused me great harm and I was very distressed."

The third qualitative question respondents were asked to address was how they believe online dangers may be avoided. 27% reported a rule of conduct stipulating that contact should be made only on the basis of personal familiarity; 15% reported that one must avoid the disclosure of personal data and information, with a focus on the importance of applying good judgment with regard to uploading and sharing content online. Another aspect, reported by 24% of participants, concerned responsible conduct of surfers, specifically, taking measures beforehand to prevent risks, such as installing safe Internet software and an antivirus. Among others, participants also reported user responsibility while surfing as an important aspect, e.g., "No talking to strangers on the Internet, limiting daily use" and in general, "being smart." In addition, 19% reported specific measures such as blocking dangerous websites and protecting the computer used to access the Internet, and 21% reported a need to increase eSafety awareness and education among children and teenagers.

eSafety, Viewing Habits, Computer Literacy, and the Number of Digital Devices in the Home

The study examined eSafety awareness in relation to background characteristics. No significant differences were found in eSafety awareness, prudent Internet use, and prevention of online risks in relation to socio-economic background. Moreover, no significant differences were found between children defined as at risk and other respondents in this study, unlike other studies (Livingstone et al., 2012; Livingstone & Smith, 2014; Zilka, 2015) that found that at-risk groups were particularly vulnerable to online hazards.

In the interviews, teenagers said that they liked surfing from site to site, like butterflies flying from flower to flower. They said that they were aware of the fact that they were increasing the level of risk when they accessed sites they were not familiar with, using the links that appeared on these sites. They indicated that they felt they were "learning a lot" by surfing from site to site without prior planning and without a pre-defined objective (35% of respondents mentioned this). Many children (48%) indicated that they were aware of the risks of this type of surfing, and that they knew how to protect themselves.

Exposure to Positive and Negative Content Online and eSafety Awareness

Characteristics of use of the Internet are liable to increase the danger to and the bullying of youths and by youths in the digital domain. These studies show that the more children and teens use the Internet and acquire digital skills, the more they enjoy various opportunities, at the same time being more exposed to risks (Livingstone, Mascheroni, et al., 2014).

Comparing the findings of this study with previous studies focusing on the dual potential of the Internet among children and teenagers (Clark, 2013; Duerager & Livingstone, 2012; Lim, 2016; Zilka, 2014, 2016b) shows that children and teenagers are aware of both the positive and negative potential of the Internet, as well as of the risks associated with surfing.

The results show that in general there is a high level of exposure to positive content among children and youths, older girls reporting higher exposure to positive online content than young girls and young boys. These findings are significant in light of the fact that studies of smart use of the Inter-

net indicated stronger exposure to its negative aspects than to positive aspects. Findings of this study are similar to those of studies conducted in the European Union by Livingstone et al. (2012), Lenhart (2005), and others, showing that girls are more likely than boys to set their profile to "private," and that they are more exposed to the positive aspects of the Internet. Older girls are less involved in acts of violence, both as active participants on the Internet and as victims, compared with younger girls. Older girls look for content in various areas of their interest, and exposure to these sites makes it more positive. The younger age group is less exposed to positive aspects than the older age group is because of the nature of content search.
Regarding exposure to negative aspects, it was found that among boys, as they grow older, such exposure increases. The findings of this study match those of studies on online aggression, and they show that the variables predicting online aggression are personal gain, low self-efficacy, and gender, with boys more likely to be aggressive on the Internet and be more exposed to negative aspects than girls (Gasser et al., 2010; Law et al., 2010; Livingstone, Kirwil, et al., 2014).

The question is how to increase the eSafety awareness of children and youths and at the same time avoid arguments and punishments. The key to success is finding a solution in cooperation with the children, defining the needs and the difficulties, and providing an adequate response. The interviews revealed that children and youths would rather not involve their parents for fear of the parents' reaction. Here are a few examples: "They will go and tell the teacher, and then the situation will be more difficult." and "They will forbid me to go online." Therefore, the children said that they preferred not to involve their parents in "difficult subjects," such as the dissemination of an embarrassing picture on Facebook, harsh and insulting things written about them, curses aimed at them, and the like. The youths explained that "parents have difficulty hearing that something harmful happened to their children, something that hurt them, so they immediately want to do something, call someone, which only exacerbates the situation. Therefore, it is best not to involve them."

Another issue that was revealed in the interview concerns the children's fear of parental criticism about their conduct. This finding is consistent with previous studies (Bickham & Rich, 2006; Leung, 2013; McQuail, 2010; Rideout et al., 2010; Roberts et al., 2005; Vandewater et al., 2006; West & Turner, 2007; Zilka, 2014). It is preferable, therefore, to avoid as much as possible a critical and judgmental attitude, and instead conduct a dialogue with the children. Youths indicated that as a result of involving their parents in events that happened online, such as uploading embarrassing photos, curses, etc., their parents often decided to limit their access to the Internet. This finding is consistent with those of previous studies showing that parents tend to restrict the Internet access of their children (Bickham & Rich, 2006; Leung, 2013; McQuail, 2010; Rideout et al., 2010; Roberts et al., 2005; Vandewater et al., 2006; West & Turner, 2007; Zilka, 2014). Children and youths are afraid of criticism and punishment by their parents. Parents must therefore talk to their children, listen to them, and try to reach a solution that is acceptable to the children; one that stimulates their sense of responsibility, as opposed to encouraging a lack of a sense of responsibility toward themselves and their environment; one that encourages a sense of personal and collective identity, as opposed to anonymity; one that to encourages a sense of belonging, sharing, and relationships, as opposed to indifference, alienation, and rejection. To engage in a dialogue, parents must be open to accepting the children's ways and be aware of the children's capacity for inclusion as well as of the place where the children happen to be; the need to reassure the children and formulate with them methods of action; they must illustrate for the children what positive values are and what is right and true; they must guide children in making free choices, at the same time developing their strengths and their ability to cope with difficulties.

Education toward smart use of the Internet may empower children and youths and encourage them to realize the potential of the opportunities for learning, personal development, civic participation, social communication, and creativity that the Internet offers, as well as develop awareness of Internet-related risks and of ways to cope with them.

Contributions of the Study

The study examined the awareness of children and youths of safe online surfing. It also examined the degree of exposure of children and youths to positive and negative aspects of the Internet.

This study illustrates the dual potential of Internet use within the context of eSafety, as seen through the eyes of children and teenagers. Characteristics of use of the Internet are liable to increase the danger to and the bullying of youths and by youths in the digital domain. It also demonstrates the promises of using the Internet for productive learning and leisure activities.

Limitations of the Study

A limitation of the study is the fact that it was based on personal reporting by the children and teenagers. Furthermore, no reports of dilemmas were included. Therefore, we recommend that future studies examine how children perceive online events for the purpose of examining their statements regarding eSafety and the way they view problematic or dangerous online events, as well as how they believe they can cope with them.

Future Studies

The recommendation are that future studies compare children, teenagers, and young adults (up to the age of 24) in how they characterize eSafety awareness and the effects of adhering to eSafety practices over the years, including after the age of 18, when participants have been using the Internet for a relatively long time. The study examined eSafety awareness by assessing and questioning children and teenage participants regarding their level of eSafety awareness and about the aspects of Internet use that they regard as either positive or negative. It is recommended to incorporate individual case studies in future research and to allow participants to express their perceptions of complex online situations.

References

Agosto, D. E., & Abbas, J. (2015). "Don't be dumb—that's the rule I try to live by": A closer look at older teens' online privacy and safety attitudes. *New Media & Society*, *19*(3), 347-365.

Annansingh, F., & Veli, T. (2016). An investigation into risks awareness and e-safety needs of children on the internet: a study of Devon, UK. *Interactive Technology and Smart Education*, *13*(2).

Beale, A.V., & Hall, K. R. (2007). Cyberbullying: What schools administrators and parents can do. *The Clearing House*, *81*, 8–12.

Bickham, D. S., & Rich M. (2006). Is television viewing associated with social isolation? Roles of exposure time, viewing context, and violent content. *Archive of Pediatric and Adolescent Medicine, 160*(4), 387-392.

Bonanno, R. A., & Hymel, S. (2013). Cyber bullying and internalizing difficulties: Above and beyond the impact of traditional forms of bullying. *Journal of Youth and Adolescence*, *42*(5), 685–697.

Borzekowski, D. L. G., Robinson, T. N. (2007). Conversations, control, and couch-time: The assessment and stability of parental mediation styles and children's TV and video viewing. *Journal of Children and Media*, *1*(2), 162–176.

Byron, T. (2008). *Safer children in a digital world: The report of the Byron Review*. Retrieved from http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/DCSF-00334-2008.pdf

Clark, L. (2013). *The parent app: Understanding families in the digital age*. New York, NY: Oxford University Press.

Cottrell, L., Branstetter, S., Cottrell, S., Rishel, C., & Stanton, B. F. (2007). Comparing adolescent and parent perceptions of current and future disapproved internet use. *Journal of Children and Media*, *1*(3), 210–226.

Duerager, A., & Livingstone, S. (2012). *How can parents support children's Internet safety?* London, UK: London School of Economics, EU Children Online.

Edwards, S., Nolan, A., Henderson, M., Skouteris, H., Mantilla, A., Lambert, P., & Bird, J. (2016). Developing a measure to understand young children's Internet cognition and cyber-safety awareness: A pilot test. *Early Years*, *36*(3), 322-335.

Evans, C. A., Jordan, A. B., & Horner, J. (2011). Only two hours? A qualitative study of the challenges parents perceive in restricting child television time. *Journal of Family Issues*, *32*, 1223.

Federal Communication Commission. (2009). *Empowering parents and protecting children in an evolving media landscape.* (MB Docket No. 09-104). Washington, D.C. Retrieved from https://apps.fcc.gov/edocs_public/attachmatch/FCC-09-94A1.pdf

Gasser, U., Maclay, C., & Palfrey, J. (2010). *Working towards a deeper understanding of digital safety for children and young people in developing countries: An exploratory study.* Cambridge, MA: Harvard University, Berkman Center for Internet & Society.

Heirman, W., & Walrave, M. (2008). Assessing concerns and issues about the mediation of technology in cyberbullying. Cyberpsychology: *Journal of Psychosocial Research on Cyberspace, 2*(2), Article 1. Retrieved from http://www.cyberpsychology.eu/view.php?cisloclanku=2008111401&article=1

Ito, M., Baumer, S., Bittanti, M., Boyd, D., Cody, R., Stephenson, B.H., … Tripp, L., (2009). *Hanging out, messing around, and geeking out.* The MIT Press.

Kowalski, R. M., & S. P. Limber, (2007). Electronic bullying among middle school students. *Journal of Adolescent Health*, *41*, 22-30.

Lansdown, G., Akullo, M., Carr, J., Hecht, M., & Palmer, T. (2011). *Child safety online: Global challenges and strategies.* United Nations Children's Fund (UNICEF) December. Retrieved from https://www.unicef-irc.org/publications/pdf/ict_eng.pdf

Law, D. M., Shapka, J. D., & Olson, B. F. (2010). To control or not to control? Parenting behaviours and adolescent online aggression. *Computers in Human Behavior*, *26*(6), 1651-1656.

Lenhart, A. (2005). Protecting teens online. Retrieved from http://www.pewInternet.org/2005/03/17/protecting-teens-online/

Leung, L. (2013). Generational differences in content generation in social media: The roles of the gratifications sought and of narcissism. *Computers in Human Behavior*, *29*(3), 997-1006.

Lim. S. S. (2016). Through the tablet glass: Transcendent parenting in an era of mobile media and cloud computing. *Journal of Children and Media*, *10*(1), 21-29.

Livingstone, S. (2013). Online risk, harm and vulnerability: Reflections on the evidence base for child Internet safety policy. ZER: *Journal of Communication Studies*, *18*, 13-28.

Livingstone, S. (2015). From mass to social media? Advancing accounts of social change. *Social Media and Society*, *1*(1). https://doi.org/10.1177/2056305115578875

Livingstone, S., & Bober, M. (2005). *UK children go online: Final report of key project findings*. London: London School of Economics and Political Science.

Livingstone, S., & Das, R. (2010). *Changing media, changing families: Polis Media and Family series*. London, UK: London School of Economic, Polis.

Livingstone, S., Haddon, L., & Görzig, A. (Eds.). (2012). *Children, risk and safety on the Internet: Research and policy challenges in comparative perspective.* Marston Books, Bristol, UK: Policy Press.

Livingstone, S., Haddon, L., Görzig, A., and Ólafsson, K. (2011). *Risks and safety on the internet: the UK report.* LSE, London: EU Kids Online. Retrieved from http://www.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20II%20(2009-11)/National%20reports/UKReport.pdf

Livingstone, S., & Görzig, A. (2014). When adolescents receive sexual messages on the Internet: Explaining experiences of risk and harm. *Computers in Human Behavior, 33*, 8-15.

Livingstone, S., Kirwil, L., Ponte, C., & Staksrud, E. (2014) In their own words: What bothers children online? *European Journal of Communication*, *29*(3), 271-288. doi: 10.1177/0267323114521045.

Livingstone, S., Marsh, J., Plowman, L., Ottovordemgentschenfelde, S., & Fletcher-Watson, B. (2015). *Young children (0-8) and digital technology: A qualitative exploratory study.* National report - *UK.*

Livingstone, S., Mascheroni, G., Ólafsson, K., & Haddon, L. (2014). *Children's online risks and opportunities: Comparative findings from EU children online and net children go mobile.* LSE, London: EU Children Online.

Livingstone, S., & Sefton-Green, J. (2016). *The class: Living and learning in the digital age*. New York, NY: NYU Press.

Livingstone, S., & Smith, P. (2014). Annual research review: Children and young people in the digital age: The nature and prevalence of risks, harmful effects, and risk and protective factors, for mobile and Internet usage. *Journal of Child Psychology and Psychiatry: Annual Research Review* 2014. Online first. doi: 10.1111/jcpp.12197.

Mason, K. L., (2008). Cyber bullying: A preliminary assessment for school personnel**.** *Psychology in the Schools*, *45*(4), 323–348.

McGonagle, T. (2011). Media literacy: No longer the shrinking violet of European audiovisual media regulation? *IRIS Plus*, *3*, 7-27.

McQuail, D. (2010*). Mass communication theory: An introduction*. London: Sage.

Nosko, A., Wood, E., & Molema. (2010). All about me: Disclosure in online social networking profiles: The case of FACEBOOK. *Computers in Human Behavior*, *26*(3), 406–418.

Ofcom - Office of Communications (2010). *UK adults' media literacy report.* Retrieved 17 May from http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/adults-media-literacy.pdf

Ofcom – Office of Communications (2016). Children and parents: media use and attitudes report. Retrieved 16 November from https://www.ofcom.org.uk/research-and-data/media-literacy-research/children/children-parents-nov16

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard. A preliminary look at cyberbullying. *Youth Violence and Juvenile Justice*, *4*, 148–169.

Rideout, V. J, Foehr U. G, & Roberts D. F. (2010). *Generation M2: Media in the lives of 8-18 year-olds.* The Kaiser Family Foundation.

Ringrose, J., Harvey, L., Gill, R., & Livingstone, S. (2013). Teen girls, sexual double standards and 'sexting': Gendered value in digital image exchange. *Feminist Theory*, *14*(3), 305–323. Retrieved from http://journals.sagepub.com/doi/abs/10.1177/1464700113499853?ssource=mfr&rss=1&

Roberts, D. F, Foehr, U. G, & Rideout, V. (2005). *Generation M: Media in the lives of 8-18 year-olds.* The Kaiser Family Foundation.

Schilder, J. D., Brusselaers, M. B., & Bogaerts, S. (2016). The effectiveness of an intervention to promote awareness and reduce online risk behavior in early adolescence. *Journal of Youth and Adolescence*, *45*(2), 286-300.

Taylor, P., & Kitter, S. (Eds.). (2010). *Millennials: A portrait of generation next.* Retrieved from http://pewsocialtrends.org/assets/pdf/millennials-confident-connected-open-to-change.pdf

Van Dijk, J. A. G. M. (2006). *The network society* (2nd ed.). London: Sage.

Vandewater E. A, Bickham D. S., & Lee J. H. (2006). Time well spent? Relating television use to children's free-time activities. *Pediatrics*, *117*(2), 181-191.

West, R., & Turner, L. (2007). *Introducing communication theory*. New York: McGraw Hill.

Wolak, J., Finkelhor, D., Mitchell, K., & Ybarra, M. (2008). Online "predators" and their victims: Myths, realities and implications for prevention and treatment. *American Psychologist*, *63*(2), 111-128.

Zilka, C.G. (2014). *Empowering parents in the social media age – The three element way*. Tel Aviv: Bitan Galim (Hebrew).

Zilka, C.G. (2015) Social competence of children at risk: Similarities and differences among the various assessors. In E. Grupper & S. Romi (Eds.), Children and adolescents at risk in Israel: Vol 2, (2015) *The voice of young people and issues faced by child and youth care workers.* MOFET Institute Publishers, Tel Aviv (Hebrew).

Zilka, C.G. (2016a). Reducing the digital divide among children who received desktop or hybrid computers for the home. *Journal of Information Technology Education: Research, 15*, 233-251. Retrieved from http://www.informingscience.org/Publications/3519

Zilka, C.G. (2016b). Do online friendships contribute to the social development of children and teenagers? The bright side of the picture. *International Journal of Humanities and Social Science* (IJHSS), *6*(7). Retrieved from http://www.ijhssnet.com/

Zilka, C.G. (2017). Awareness of ICT capabilities, digital literacy, and use of reflective processes in children who received their first home computer. *Journal of Technology Enhanced Learning*, *9*(1), 80-98. Retrieved from http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijtel

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