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Cyberbullying in WhatsApp Classroom Groups among Children and Adolescents: Exposure and Victimization

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Abstract: Social networks are an essential part of school-aged children's social lives. WhatsApp application is perceived as a social network which enjoys enormous popularity among children and adolescents. Nonetheless, alongside the increasing popularity of WhatsApp, increases cyberbullying, defined as an aggressive online behavior aimed to harm another person through internet and technological communication means. The present study is a pilot research aimed to learn about the extent, characteristics and expressions of cyberbullying that children and adolescents experience in WhatsApp groups in their classes, either as witnesses, or as victims. Additionally, the study aims to offer a classification of cyberbullying in WhatsApp groups. Data was collected from Israeli students who learn in 4^{th} to 12^{th} grades (N = 1111). The participants completed a questionnaire regarding cyberbullying in their class WhatsApp groups. Findings indicated that the vast majority of participants are members in at least one WhatsApp group in their classes, to which it`s important for them to belong. Alongside, most participants experience cyberbullying in their WhatsApp class-groups, either as victims or as witnesses and over half of them experience more than one expression of cyberbullying simultaneously. Insults are the most common expression of cyberbullying. After that swearword, forced removal from a group and posting offensive photos. Witnessing WhatsApp cyberbullying is more common than personal victimization. In addition, findings indicated of differences in cyberbullying expressions according to the level of educational institution (elementary school, middle school, and high school). Implications regarding schools` and parents` roles, including developing educational policy and school curriculum, are discussed.

Keywords: Cyberbullying, WhatsApp, Social networks, Children, Adolescents

Introduction

Nowadays, children and adolescents lead their social lives in two parallel dimensions: the real world, and the virtual one. There is a completion and continuity between classmates` social lives in these two dimensions. Thus, relationships and events that begin in one dimension continue in the other (Heiman, Olenik-Shemesh, & Eden, 2014). In the virtual world, social networks such as WhatsApp application play a major role as popular social platforms (Bouhnik & Deshen, 2014; Thorne, Sauro, & Smith, 2015).

Alongside the increasing popularity of WhatsApp, increases the exposure to cyberbullying, an aggressive online activity, aimed to harm another person (Kowalski, Limber, & Agatston, 2012; Patchin & Hinduja, 2012; 2015). Though much has been written about cyberbullying in regard to facebook, the literature about cyberbullying in WatsApp application is scarce (Bouhnik & Deshen, 2014; Montag et al., 2015; Sánchez-Moya, & Cruz-Moya, 2015).

The present study aims to provide a wide and detailed description of cyberbullying in WhatsApp classroom groups among Israeli school-aged children and adolescents, as well as to propose a tool for measurement of cyberbullying in WhatsApp groups, by providing an updated measurement-based classification of cyberbullying in WhatsApp classroom groups. The study might shed light on this important subject and provide a basis for scientific debate and preventive intervention programs.

WhatsApp: The New Social Network

The World Health Organization's HBSC (Health Behavior in School-aged Children) survey, which compares child and adolescent behaviors in 41 countries, shows that Israel ranks fourth in daily use of 4 hours or more on the computer, cellular, and internet, among 11, 13 and 15 year old students (Inchley et al., 2016). Students' use of the internet includes diverse activities, as communication with friends on instant messaging applications, watching videos, searching information, and playing games (Inchley et al., 2016; Israeli National Council for the Child, 2017). 83% of Israeli youth (8-15 year olds) have their own smart-phones and most of them receive it for the first time by the age of nine. Their smart-phones offer them direct access to internet and social networks, anywhere anytime, and indeed they mostly go on line through their smart-phones (Israeli National Council for the Child, 2017).

One of mobile-based online most preferred activities among youth is WhatsApp engagement (Bouhnik & Deshen, 2014; Thorne et al., 2015; Israeli National Council for the Child, 2017). The application is a free communication app installed mainly on smart-phones, which facilitates the exchange of multimodal communication forms, including instant text and voice messaging, photos, videos and voice and video calls via an internet connection (WhatsApp website, 2018). However, WhatsApp is more than a mean of communication and is considered as a social network, due to several features. For instance, WhatsApp users are prompted to provide personal information and create their own digital profile, in which they can include a photo, a nickname, a status, and a description of their online persona (Bouhnik & Deshen, 2014; Thorne et al., 2015). Additionally, WhatsApp provides users means to build, manage, and communicate with a personal relational network, such as group communication. In this case, the group manager can add new members to the group or remove them, needless of their permission (Bouhnik & Deshen, 2014; WhatsApp website, 2018).

All these characteristics posit WhatsApp as a core form of communication and one of the most popular social networks in many social communities, used by over a billion people all round the world (Bouhnik & Deshen, 2014; Montag et al., 2015; Sánchez-Moya & Cruz-Moya, 2015; WhatsApp website, 2018), and indeed, during the last years, WhatsApp has become the fastest-growing company in history, in terms of users (Fiadino, Schiavone, & Casas, 2014; WhatsApp website, 2018). One of the countries in which WhatsApp gains enormous popularity, especially among youth, is Israel. About 90% of Israeli adolescents aged 13-17 use WhatsApp application, and an average Israeli teenager is a member of 27 WhatsApp groups (Israeli National Council for the Child, 2017).

However, alongside the increasing popularity of WatsApp and expansion of uncontrolled exposure to diversity of contents, increases one of its` unfortunate aspects: the risk of experiencing cyberbullying (Eden, Heiman, & Olenik-Shemesh, 2014; Holfeld & Grabe, 2012).

Cyberbullying in WhatsApp Groups

Cyberbullying is defined as intended and repeated aggressive activity, carried out by one person or more, aimed to harm another person by internet and technological communication means, including computers, cell-phones, or other electronic devices, through social networks and chats (Kowalski et al., 2012; Patchin & Hinduja, 2012; 2015). Cyberbullying may be manifested in vigilantism, bullying, bigotry, gossiping, mocking, condemning, insulting, exposing lies, harassing, sharing offensive messages or photos, hateful posts or otherwise, commenting directly to or about the victim (Heiman et al., 2014; Kowalski et al., 2012; Patchin & Hinduja, 2012; 2015). Cyberbullying can occur through various online arenas, such as WhatsApp classroom groups, which consist of classmates. Kowalski and Limber (2007) found instant messaging applications such as WhatsApp to be the most frequently used arenas for cyberbullying.

Cyberbullying can take many different forms. Willard (2005) created a taxonomy of cyberbullying in social networks that includes flaming (i.e., an online fight), harassment (i.e., repetitive, offensive messages sent to a target), outing and trickery (i.e., soliciting personal information from someone and then electronically sharing that information with others without the individual's consent), exclusion (i.e., blocking an individual from buddy lists), impersonation (i.e., posing as the victim and electronically communicating negative or inappropriate information with others as if it were coming from the victim), cyber-stalking (i.e., using electronic communication to stalk another person by sending repetitive threatening messages), and sexting (i.e., distributing nude pictures of another individual without that person's consent). Another classification, presented in the current study, was built as a tool for measuring cyberbullying in WhatsApp classroom groups and classified four types of cyberbullying behaviors: (1) verbal violence (i.e., manifested in mock, curses, insults,

derogatory names, threats); (2) group violence (reflected in opening a group against someone, group rejection and so forth); (3) visual violence, such as using photos or videos offensively (i.e., posting or sharing offensive photos and videos, tagging photos and videos offensively); and (4) group selectivity, that is, selectivity in choosing group members (i.e., opening a group without a person despite his will to be included, preventing entry to a group, forced removal from a group, opening a group of "selected members" only). Consensus regarding cyberbullying measurement strategies is crucial in order to develop a common basis for scientific debate.

Due to the open and constantly available nature of WhatsApp application, victims may face constant and repeated assault at any given time (Roberto, Eden, Savage, Ramos-Salazar, & Deiss 2014). Consequently, cyberbullying victimization has potentially devastating effect on the emotional and psychological well-being of children and adolescents (Hinduja & Patchin, 2013; Schultze-Krumbholz, Jakel, Schultze, & Scheithauer, 2012), manifested in negative emotions and depression, self-harm and suicidal ideation and attempts (Bauman, Toomey, & Walke, 2013), negative academic achievement and school difficulties, dropout from school, violent behavior, delinquency, difficulties with peers, unsafe sex practices, and involvement in substance use (Hinduja & Patchin, 2013; Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Schultze-Krumbholz et al., 2012; Sinclair, Bauman, Poteat, Koenig, & Russell, 2012; Sourander et al., 2010).

Exposure and Victimization of Cyberbullying

Cyberbullying in WhatsApp groups may be characterized by two levels of cyberbullying: personal victimization and witnessing others being victimized. Cyberbullying in WhatsApp groups usually occurs in the presence of witnesses. The witnesses may be the only ones who know about the assault, because the victims rarely share it with adults, therefore their response is of great importance (Willard, 2005). The witnesses may react in different ways, ranging from encouraging the assault, to victimize it themselves. Encouragement of the assault may be expressed in supporting it passively or actively, by watching what is happening in the group, encouraging the offender, passing the offensive messages onward, or intervening behind the scenes (Heiman et al., 2014; Willard, 2005).

On the other hand, the harm involved in witnessing cyberbullying may be expressed either by the possibility that exposure to violent online behavior may encourage witnesses to adapt the characteristics of such behavior, or by fear of witnesses to be hurt themselves by such behavior, or become a new target for bullies - a fear that turns them into victims themselves (Druck & Kaplowitz, 2005). This means that children and adolescents may victimize cyberbullying as witnesses, even if they are not direct victims.

Moreover, as for the victim, cyberbullying with witnesses present is perceived as more harmful, humiliating and severe than with no witnesses. This is because children are concerned that following assault in the presence of their peers, their social status might get hurt and their humiliation would be widespread (Sticca & Perren, 2013).

Age Differences in Cyberbullying

Cyberbullying may emerge at any age, from elementary school to college. Numerous studies have examined whether age is a significant predictor of cyberbullying victimization, aiming to determine the critical grade levels for effective preventive intervention in the school setting (Tokunaga, 2010). However, findings have been inconsistent. While some studies have found a bell distribution, peeking between the ages 12 to 15 (middle school) (Álvarez-García, Pérez, Carlos, González, & Pérez, 2015; Sevcikova & Smahel, 2009; Smith et al., 2008; Williams & Guerra, 2007), others have reported of a negative correlation between age and cyberbullying victimization (Schneider, O`Donnell, Stueve, & Coulter, 2012), a positive correlation (Del-Rey, Elipe, & Ortega-Ruiz, 2012; Mark & Ratllife, 2011), or none at all (Hinduja & Patchin, 2008; Varjas, Henrich, & Meyers, 2009). A meta analyses suggests that the inconsistent findings may result from the wide range of age groups included in different studies, whereas findings of studies that use narrow ranges of grade levels are more consistent. Another explanatory hypothesis suggests that the mixed findings may be attributed to a curvilinear relationship between age and cyberbullying victimization (Tokunaga, 2010).

Resent finding regarding Israeli students have shown discrepancy a well. Whereas Heiman et al. (2014) found that elementary and middle school students are more likely to be cyberbullying victims than high school students, the latest findings from a national survey conducted by the National Authority for Measurement and Evaluation in Education (RAMA) in Israel show no grade-level differences in overall cyberbullying

victimization among fourth to eleventh grade students (RAMA, 2018). Nonetheless, in both studies verbal violence was more common than visual violence, and in the latter, verbal violence decreased inversely to grade level while visual violence showed the opposite trend. It is noteworthy, however, that none of the previous studies examined age differences in WhatsApp groups, but rather in other social networks. Ultimately, the inconsistency among studies may imply that more research is needed in order to determine the role of age as a predictor of cyberbullying victimization in WhatsApp classroom groups.

The Current Study

The current study examines WhatsApp classroom groups as a potential arena of cyberbullying. As a pilot research, it aims to examine the extent, the characteristics and expressions of cyberbullying victimization that Israeli school-aged children experience in WhasApp groups in their classes. The study also aims to evaluate the relations between schools` age levels and cyberbullying victimization. Striving to understand the scope of WhatsApp cyberbullying and the various manifestations of this new phenomenon, the study might shed light on this important subject and offer a measurement tool, as a basis for scientific debate and preventive interventions.

The main questions of this research are: (1) What is the extent of cyberbullying exposure and victimization in WhatsApp classroom groups, among children and adolescents? (2) What are the most common types of cyberbullying in WhatsApp classroom groups? (3) What percentage of elementary, middle, and high school students experience cyberbullying in WhatsApp groups in their classes? And (4) how does the rate of cyberbullying in class WhatsApp groups vary by grade level?

Method

Participants and Procedure

Data was collected from 1,111 students, sampled from public schools: elementary schools - 4^{th} to 6^{th} grade students (n = 412, 37%), middle schools - 7^{th} to 9^{th} grade students (n = 312, 28%), and high schools - 10^{th} to 12^{th} grade students (n = 387, 35%). Students` distribution by grade is shown in Table 1. All schools were in neighborhoods ranging between lower to middle socio-economic status.

Table 1.Frequencies of Students by Grades (N = 1,111)

Grades	*n*	%
4	116	11
5	130	12
6	156	14
Total elementary school	412	37%
7	101	9
8	111	10
9	100	9
Total middle school	312	28%
10	102	9
11	108	10
12	177	16
Total high school	387	35%
N	1,111	100%

10 students (0.9%) who reported that there was not any WhatsApp group in their classes (6 elementary school students, 3 middle school students, and one high school student), were excluded from the sample. The statistical analyses included a sample of (N = 1101) students.

Schools that participated in the study were involved in a regional survey, monitored by a regional educational counselor with responsibility and approval of a supervisor from the Israeli ministry of education. No identifying details were collected from students, except grade level. Students filled the questionnaires voluntarily, there were no mandatory questions, and no sanctions were taken against students if they chose not to participate at all, or not to complete the questionnaires. During the survey, there was a teacher present in the classroom for supervising and maintaining the order. Despite the teacher`s presence, the privacy of students was strictly maintained. The teacher was not allowed to pass between the students while completing the survey

questionnaires and was asked to respect the privacy of the information provided by them. Students completed the survey online at school and had the option to complete it at home.

Measures

Cyberbullying exposure and victimization in class WhatsApp groups. The questionnaire was developed for the regional survey and referred to cyberbullying exposure and victimization in participants` WhatsApp classroom groups. The questionnaire is based on previous questionnaire that examined cyberbullying (Heiman et al., 2014), which consisted the basis for verbal and visual violence items. However, a new item, addressing a unique WhatsApp characteristic, forced removal from a WhatsApp group, was added to the questionnaire of the present study.

The questionnaire included two types of questions: (1) Background questions aimed to receive information about the respondent`s grade-level, about the number of WhatsApp groups participated by classmates, and about the extent to which it is important for the respondent to belong to the WhatsApp classroom groups. (2) Items referring to cyberbullying exposure and victimization in the WhatsApp classroom groups. Cyberbullying was assessed through 4-Items of cyberbullying directed at the victim or his classmates. The 4-Items scale was divided into three types of cyberbullying: (1) verbal violence (i.e., insults, curse words); (2) visual violence (i.e., posting offensive photos); and (3) group violence and selectivity (i.e., forced removal from a group). Students were asked to report whether they had been victimized by each of the cyberbullying expressions while participating in their class WhatsApp groups. For example: "My classmates insulted me in a class WhatsApp group". Additionally, for each cyberbullying type, students were asked to report whether they had witnesses each of the cyberbullying expressions directed at another classmate. For example: "My classmates removed another classmate from a class WhatsApp group against his will". Response options for each event included 3-Point scale: 0 = "*Do not agree*"; 1 = "*Not sure*"; and 2 = "*Agree*". A dichotomous score for cyberbullying exposure and victimization for each item was built for this scale: 1 (cyberbullying exposure /victimization), and 0 (there is no cyberbullying, or it is not certain that cyberbullying exists).

Results

Class WhatsApp groups. Of all survey respondents, 99.1% (N = 1101) reported that there was at least one WhatsApp group in their classes. Moreover, 87% of the respondents (n = 957) reported that there was more than one class WhatsApp group. The vast majority (93%) of the students reported that belonging to the class WhatsApp groups was important for them.

Extent of cyberbullying. Despite the enormous popularity of WhatsApp among the participants, 70% (n=771) reported of exposure to cyberbullying in their class whatsApp groups. Summary of students' responses by different cyberbullying expressions showed that 17.6% witnessed one cyberbullying expression in their class WhatsApp groups, 19.5% witnessed two types, and 32.9% were exposed to three or more cyberbullying types symultaneously. Additionally, 30.7% (n = 338) reported of personal victimization of cyberbullying in their class WhatsApp groups. Of them, 16.3% experienced one type of cyberbullying, 8% experienced two types, and 6.4% experienced three or more types of cyberbullying in their class WhatsApp groups.

Extent of cyberbullying types. Frequencies of participants' cyberbullying exposure and victimization in class WhatsApp groups are represented in Tables 2 below. The distribution of the answers shows that the most common types of cyberbullying are insults, after that curse words, forced removal from a WhatsApp group, and finally posting offensive photos. 15.3% of the respondents reported of personal victimization of insults, 14.1% were cursed, 13% were removed from a class WhatsApp group against their will, and 10.4% reported that their offensive photos had been posted in a class WhatsApp group.

Table 2.Frequencies of cyberbullying by cyberbullying type and exposure Vs victimization in class whatsapp groups (N = 1101)

	Exposure		Yes	No	Total Victimization
Insults	No	n	426	506	932
		%	38.7	46.0	84.7
	Yes	n	142	27	169
		%	12.9	2.5	15.3
	Total Exposure	n	568	533	1101
		%	51.6	48.4	100.0
Curse Words	No	n	383	563	946
		%	34.8	51.1	85.9
	Yes	n	136	19	155
		%	12.4	1.7	14.1
	Total Exposure	n	519	582	1101
		%	47.1	52.9	100.0
Removal from a Group	Yes	n	318	640	958
		%	28.9	58.1	87.0
	No	n	115	28	143
		%	10.4	2.5	13.0
	Total Exposure	n	433	668	1101
		%	39.3	60.7	100.0
Offensive Photos	Yes	n	223	764	987
		%	20.3	69.4	89.6
	No	n	94	20	114
		%	8.5	1.8	10.4
	Total Exposure	n	317	784	1101
		%	28.8	71.2	100.0

Victimization

*Schools` age levels differences of cyberbullying.* In order to examine whether there were differences between schools` age levels in relation to the extent of cyberbullying victimization, one-way analyses were performed in the 1X3 array. The independent variable in the analyses was the school`s age level (3: elementary, middle and high schools), and the dependent variable in each analysis was a total cyberbullying score. The analyzes results did not indicate significant differences between schools` age levels $F(2, 1098) = 2.26$, $p = .105$.

In order to examine whether there were differences between schools` age levels by the type of cyberbullying expression, chi-squared test was performed for each cyberbullying type. The independent variable in the analysis was school`s age level (3: elementary, middle and high schools). The dependent variable in each analysis was the frequency of each of the cyberbullying types. The distributions received, and the results of the chi-squared tests are presented below in Table 3.

The analyses results indicated of significant differences between schools` age levels regarding three types of cyberbullying in class WhatsApp groups: insults, forced removal from a group and posting offensive photos. Insults victimization decreases inversely to school`s age level. A similar correlation emerges regarding forced removal from a WhatsApp group. On the other hand, an opposite trend takes place in relation to posting offensive photos, which increases as school age level raises.

Table 3. Cyberbullying victimization by type of cyberbullying expression and schools` age levels (N = 1101)

		Elementary school (n = 406)	Middle school (n = 309)	High School (n = 386)	$\chi^2_{(2)}$
Insults	n	79	40	50	8.36*
	%	19.5	12.9	13.0	
Curse words	n	65	39	51	1.88
	%	16.0	12.8	13.3	
Forced removal from a group	n	73	38	32	16.62***
	%	18.0	12.3	8.3	
Offensive photos	n	29	32	53	9.25**
	%	7.1	10.4	13.7	

*$p < .05$; **$p = .01$; ***$p < .002$

Discussion

The current study examined cyberbullying exposure and victimization in class WhatsApp groups, among Israeli children and adolescents. The findings reflect a distressing phenomenon of cyberbullying.

The vast majority of participants report that there is at least one (99.1%) or more (87%) WhatsApp groups in their classes, to which it is important for them to belong (93%). These findings further validate that WhatsApp is an extremely popular social network and an essential arena of social life, among Israeli children and adolescents (Bouhnik & Deshen, 2014).

Although WhatsApp application is extremely popular among youth and carries the potential of a positive contribution to teen social lives (Cetinkaya, 2017; Montag et al., 2015; Sánchez-Moya & Cruz-Moya, 2015), it can also be used as an arena of violence. Accordingly, findings showed that 70% of the students reported of exposure to cyberbullying in their class whatsApp groups and almost one third experienced personal victimization of cyberbullying while participating in WhatsApp groups in their classes, while over half of them victimized more than one cyberbullying type simultaneously. These findings are consistent with previous studies regarding cyberbullying victimization rates, though it is important to underline that previous studies examined cyberbullying in other social networks, while as far as is known, this is the first study examining the phenomenon in WhatsApp application (Campbell, 2007; Li, 2007; Patchin & Hinduja, 2011; 2012; Tsitsika et al., 2015).

The findings of the present study show that exposure to cyberbullying in class WhatsApp groups is more common than personal victimiation, in all the types of cyberbullying. These findings are consistent with previous findings, which show that exposure to cyberbullying is more common than personal victimization (46% and 27%, respectively) (Heiman et al., 2014). Given that witnessing others being victimized occurs in group forums, which many users share, while victimization is personal, these findings are logical and predictable. However, participants who indicated that they had experienced personal victimization of cyberbullying may have reported that they witnessed others being victimized as well. This may have effected the frequencies of cyberbullying exposure and victimization.

The present study also adds to the existing knowledge by presenting a classification of the different types of cyberbullying in class WhatsApp groups, as a basis for measurement and scientific debate. This classification enabled to measure cyberbullying in WhatsApp groups with a closer look at four types of cyberbullying expressions. Findings showed that the most common type of cyberbullying victimization was verbal violence, expressed mainly by insults (15.3%) and curse words (14.1%). The second common type was group violence and selectivity, reflected in forced removal from groups (13%), and finally, visual violence i.e., posting offensive photos (10.4%). This distribution is consistent with previous findings regarding cyberbullying victimization in other social networks, indicating that verbal violence is more common and perceived as less severe than visual violence (Heiman et al., 2014; Smith, Mahdavi, Carvalho, & Tippett, 2006; RAMA, 2018).

Further findings of the current study revealed significant differences between schools` age levels, regarding verbal violence (insults), and group violence and selectivity (forced removal from a group), that decreased inversely to school`s age level, and visual violence (posting offensive photos), that increased as school age raised. These findings are consistent with previous studies that examined cyberbullying in other social networks, regarding verbal and visual violence (Heiman et al., 2014; RAMA, 2018). These findings shed light on age-related cyberbullying behaviour, therefore reflect the needs emerging from the school setting, that can serve as guidelines for preventive intervention.

Recommendations

In light of the findings, educators are encouraged to operate systematically and pro-actively in order to reduce cyberbullying and establish optimal communication norms in WhatsApp groups. It is proposed to intervene in two systemic channels simultaneously: preventive curriculum and school policy. Regarding the former, it is recommended to develop school policy regarding online communication standards, as integral part of school regulations. As to the latter, it is recommended to develop and implement spiral preventive curriculum, adapted to cyberbullying characteristics in different grade levels. Based on the findings of the present study, in primary schools such curriculum may focus on verbal violence and group violence and selectivity prevention, and in secondary schools- on visual violence prevention.

Strengths and Limitations

The findings of the current study contribute by presenting a classification of four types of cyberbullying in class WhatsApp groups and their rates, referring to exposure and personal victimization of cyberbullying, as well as by shedding light on the role of grade-level as a predictor of different cyberbullying types. The knowledge gained from this analysis enables educators to develop preventive intervention programs adapted to the genuine needs of students taken from the field.

An additional strength of this study lies in its` wide sample of students (*N*= 1,111), that gives the benefit of high external validity due to it`s large and representative sample size. Furthermore, the study sample included students from a wide range of grade-levels, which allowed for a broad examination of the differences between age groups.

A limitation of the current study relates to the lack of reference to the gender of the participants. Research on gender differences in cyberbullying victimization has shown inconsistent findings (Beckman, Hagquist & Hellstrom, 2013; Navarro, 2016), with the majority of studies not revealing any gender differences (i.e., Griezel, Finger, Bodkin-Andrews, Craven, & Yeung, 2012; Hinduja & Patchin, 2008; Smith, Thompson, & Bhatti, 2012). Although some studies have provided support for viewing gender as a significant predictor of victimization, some have shown that girls are more likely to victimize cyberbullying than goys (Walrave & Heirman 2011; Minghui, Xu, & McJunkin, 2016), while others have shown that boys are more likely than girls (Fanti, Demetrious, & Hawa, 2012). Given the literature discrepancy, it seems important to further investigate gender as a predictor of cyberbullying victimization.

Another limitation of the current study relates to representation of the different cyberbullying types in the questionnaire. While verbal violence was represented by two items (insults and curse words), visual violence and group selectivity was represented by one question (posting offensive photos and forced removal from a group, respectively), and group violence was not represented at all. Future research should enable better and equal representation of all four types of cyberbullying in WhatsApp groups.

References

Álvarez-García, D., Pérez, J., Carlos, N., González, A.D. & Pérez, C.R. (2015). Risk factors associated with cybervictimization in adolescence. *International Journal of Clinical and Health Psychology, 15*(3), 226-235. doi: 10.1016/j.ijchp. 2015.03.002

Bauman. S., Toomey, R.B., & Walker, J.L. (2013). Associations among bullying, cyberbullying, and suicide in high school students. *Journal of Adolescence, 36*(2), 341–50. doi: 10.1016/j.adolescence.2012.12.001

Beckman, L., Hagquist, C., & Hellstrom, L. (2013). Discrepant gender patterns for cyberbullying and traditional bullying - An analysis of Swedish adolescent data. *Computers in Human Behavior, 29*(5), 1896-1903. doi: 10.1016/j.chb. 2013.03.010

Bouhnik, D., & Deshen, M. (2014). WhatsApp goes to school: Mobile instant messaging between teachers and students. *Journal of Information Technology Education: Research, 13*, 217-231. doi: 10.28945/2051

Campbell, M. A. (2007). Cyber bullying and young people: Treatment principles not simplistic advice. In www.scientist-practitioner.com, Paper of the week 23rd February 2007. Retrieved from http://eprints.qut.edu.au/14903/1/14903.pdf

Cetinkaya, L. (2017). An educational technology tool that developed in the natural flow of life among students: WhatsApp. International *Journal of Progressive Education*, 13, 29-47. Retrieved from http://ijpe.penpublishing.net/files/2/ manuscript/manuscript_234/ijpe-234-manuscript-140040.pdf

Del-Rey, R., Elipe, P., & Ortega-Ruiz, R. (2012). Bullying and cyberbullying: Overlapping and predictive value of the co-occurrence. *Psicothema, 24*(4), 608-613. Retrieved from http://www.redalyc.org/html/727/72723959016/

Druck, K., & Kaplowitz, M. (2005). Setting up a no-bully zone. *Virginia Journal of Education, 98*(4), 11-13.

Eden, S., Heiman, T., & Olenik-Shemesh, D. (2014). Bully versus victim on the internet: The correlation with emotional-social characteristics. *Education & Information Technologies, 21*(3), 699-713. doi: 10.1007/s10639-014-9348-2

Fanti, K.A., Demetrious, A.G., & Hawa, V.V. (2012). A longitudinal study of cyberbullying: Examining risk and protective factors. *European Journal of Developmental Psychology, 9*(2), 168–181. doi: 10.1080/17405629.2011. 643169

Fiadino, P., Schiavone, M., & Casas, P. (2014). Vivisecting WhatsApp through large-scale measurements in mobile networks. *ACM SIGCOMM Computer Communication Review, 44*(4), 133-134. doi: 10.1145/2619239.2631461

Griezel, L., Finger, L.R., Bodkin-Andrews, G.H., Craven, R.G., & Yeung, A.S. (2012). Uncovering the structure of gender and developmental differences in cyber bullying. *The Journal of Educational Research, 105*(6), 442–455. doi: 10.1080/ 00220671.2011.629692

Heiman, T., Olenik-Shemesh, D., & Eden, S. (2014). Violence and victimization on the internet: Features, patterns, risk factors and protective factors among children and adolescents. Research report for the Ministry of Education. [Hebrew]. Retrieved from http://cms.education.gov.il/NR/rdonlyres/5B2E6358-A9D7-4F8B-83A2-E1F46CB4DF94/185400/Unnamed6.pdf

Hinduja, S., & Patchin, J.W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior, 29*(2), 129–156. doi: 10.1080/01639620701457816

Hinduja, S., & Patchin, J.W. (2013). Social Influences on Cyberbullying Behaviors among middle and high school students. *Journal of Youth and Adolescence, 42*(5), 711-722. doi: 10.1007/s10964-012-9902-4

Holfeld, B., & Grabe, M. (2012). Middle school students' perceptions of and responses to cyber bullying. *Journal of Educational Computing Research, 46*(4), 395 – 413. doi: 10.2190/EC.46.4.e

Inchley, J., Currie, D., Young, T., Samdal, O., Torsheim, T., Augustson, L., Mathison, F., Aleman-Diaz, A., Molcho, M., Weber, M., & Barnekow, V. (2016). Growing up unequal: Gender and socioeconomic differences in young people's health and well-being. Health behaviour in school-aged children (HBSC) study: International report from the 2013/2014 survey. *Copenhagen: Health Policy for Children and Adolescents, no. 7*, WHO Regional Office for Europe. Retrieved from http://alkoholdialog.dk/wp-content/uploads/2016/08/HBSC-2016.pdf

Israeli National Council for the Child (2017). *Children in Israel 2017*. Jerusalem: The National Council for the Child. [Hebrew] Retrieved from http://go.ynet.co.il/pic/news/shnaton2017.pdf

Kowalski, R.M., & Limber, S.P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health, 41*(6), 22–30. doi: 10.1016/j.jadohealth. 2007.08.017

Kowalski, R.M., Giumetti, G.W., Schroeder, A.N., & Lattanner, M.R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin, 140*(4), 1073-1137. doi: 10.1037/ a0035618.

Kowalski, R.M., Limber, S.P., & Agatston, P.W. (2012). *Cyberbullying: Bullying in the digital age.* West Sussex: John Wiley & Sons.

Li, Q. (2007). Bullying in the new playground: Research into cyberbullying and cyber victimization. *Australasian Journal of Educational Technology, 23*(4), 435-454. doi: 10.14742/ajet.1245

Mark, L., & Ratliffe, K.T. (2011). Cyber worlds: New playgrounds for bullying. *Computers in the Schools, 28*(2), 92-116. doi: 10.1080/07380569.2011. 575753

Minghui, G., Xu, Z., & McJunkin, M. (2016). Adolescents' experiences of cyberbullying: Gender, age and reasons for not reporting to adults. *International Journal of Cyber Behavior, Psychology & Learning, 6*(4), 13-27. doi: 10.4018/IJCBPL.2016100102

Montag, C., Błaszkiewicz, K., Sariyska, R., Lachmann, B., Andone, L., Trendafilov, B., Eibes, M., & Markowetz, A. (2015). Smartphone usage in the 21st century: who is active on WhatsApp? *BMC Research Notes, 8*(1), 1-6. doi: 10.1186/s13104-015-1280-z

Navarro, R. (2016). Gender issues and cyberbullying in children and adolescents: From gender differences to gender identity measures. In R. Navarro, S. Yubero, & E. Larranaga (Eds.), *Cyberbullying across the globe: Gender, family, and mental health* (pp. 35-61). Switzerland: Springer.

Patchin, J.W., & Hinduja, S. (2011). Traditional and nontraditional bullying among youth: A test of general strain theory. *Youth and Society, 43*(2), 727–751. doi: 10.1177/0044118X10366951

Patchin, J.W., & Hinduja, S. (2012). Cyberbullying: An update and synthesis of the research. In J. Patchin, & S. Hinduja (Eds.), *Cyberbullying prevention and response: Expert perspectives* (pp. 13–35). New York: Routledge.

Patchin, J.W., & Hinduja, S. (2015). Measuring cyberbullying: Implications for research. *Aggression and Violent Behavior, 23*, 69-74. doi: org/10.1016/j.avb. 2015.05.013

RAMA-The National authority for measurement and evaluation in education (2018). Monitoring the level of violence in schools according to students' reports [Hebrew]. Retrieved from: http://meyda.education.gov.il/files/Rama/Nitur_Alimut_Report_Students_2017.pdf

Roberto, A., Eden, J., Savage, M., Ramos-Salazar, L., & Deiss D. (2014). Outcome evaluation results of school-based cybersafety promotion and cyberbullying prevention intervention for middle school students. *Health Communication, 29*(10), 1029-1042. doi: 10.1080/10410236.2013.831684

Sánchez-Moya, A. & Cruz-Moya, O. (2015). "Hey there! I am using WhatsApp": A preliminary study of recurrent discursive realisations in a corpus of WhatsApp statuses. *Procedia - Social and Behavioral Sciences, 212*(2), 52-60. doi: org/10.1016/j.sbspro.2015.11.298

Schneider, S.K., O`Donnell, L., Stueve, A., & Coulter, R.W. (2012). Cyberbullying, school bullying, and psychological distress: A regional census of high school students. *American Journal of Public Health, 102*(1), 171-177. doi: 10.2105/AJPH.2011.300308

Schultze-Krumbholz, A., Jakel, A., Schultze, M., & Scheithauer, H. (2012). Emotional and behavioral problems in the context of cyberbullying: A longitudinal study among German adolescents. *Emotional & Behavioral Difficulties, 17*(3-4), 329-345. doi: org/10.1080/13632752.2012.704317

Sevcikova, A., & Smahel, D. (2009). Online harassment and cyberbullying in the Czech Republic comparison across age groups. *Journal of Psychology, 217*(4), 227-229. doi: org/10.1027/0044-3409.217.4.227

Sinclair, K.O., Bauman, S, Poteat, V.P., Koenig, B., & Russell, S.T. (2012). Cyber and bias-based harassment: Associations with academic, substance use, and mental health problems. *Journal of Adolescent Health, 50*(5), 521–523. doi: 10.1016/j.jadohealth.2011.09.009

Smith, P.K., Mahdavi, J., Carvalho, M., & Tippett, N. (2006). *An investigation into cyberbullying and its forms, awareness and impact and the relationship between age and gender in cyberbullying.* A report to the Anti-Bullying Reasons why adolescents bully 19 Alliance. Unit of School and Family Studies, Goldsmith College: University of London. Retrieved from https://www.staffsscb.org.uk/Professionals/Key-Safeguarding/e-Safety/Task-to-Finish-Group/Task-to-Finish-Group-Documentation/Cyber-Bullying---Final-Report.pdf

Smith, P.K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry 49*(4), 376-385. doi: org/10.1111/j.1469-7610. 2007.01846.x

Smith, P.K., Thompson, F., & Bhatti, S. (2012). Ethnicity, gender, bullying and cyberbullying in English secondary school pupils. *Studia Edukacyjne,23, 7-18.* Retrieved from https://repozytorium.amu.edu.pl/bitstream/10593/5886/1/ studia_eduk_23_s_7-18.pdf

Sourander, A., Klomek, A.B., Ikonen, M., Lindroos, J., Luntamo, T., Koskelainen, M., Ristkari, T., & Helenius, H. (2010). Psychosocial risk factors associated with cyberbullying among adolescents: a population-based study. *Archives of General Psychiatry, 67*(7), 720–728. doi: 10.1001/archgenpsychiatry.2010.79

Sticca, F., & Perren, S. (2013). Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of Youth Adolescence, 42*(5), 739-750. doi: 10.1007/s10964-012-9867-3

Thorne, S. L., Sauro, S., & Smith, B. (2015). Technologies, Identities, and Expressive Activity. *Annual Review of Applied Linguistics, 35*, 215-233. doi:10.1017/S0267190514000257

Tokunaga, R.S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior, 26*(3), 277-287. doi: org/10.1016/j.chb.2009.11.014

Tsitsika, A., Janikian, M., Schoenmakers, T.M., Tzavela, E.C., Ólafsson, K., Wójcik, S., Florian, M.G., Tzavara, C., & Richardson, C. (2014). Internet addictive behavior in adolescence: A cross-sectional study in seven European countries. *Cyberpsychology, Behavior, and Social Networking, 17*(8), *528-535.* doi: 10.1089/cyber.2013.0382

Varjas, K., Henrich, C. C., & Meyers, J. (2009). Urban middle school student's perceptions of bullying, cyberbullying, and school safety. *Journal of School Violence, 8*(2), 159–176. doi: org/10.1080/15388220802074165

Walrave, M., & Heirman, W. (2011). Cyberbullying: Predicting victimization and perpetration. *Children & Society, 25*(1), 59-72. doi: 10.1111/j.1099-0860. 2009.00260.x

WhatsApp-Website. Retrieved from https://www.whatsapp.com/about/

Willard, N.E. (2005). *Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress.* Champaign, IL: Research Press.

Williams, K., & Guerra, N. (2007). Prevalence and predictors of internet bullying. *Journal of Adolescent Health, 41*(6), 14-21. doi: org/10.1016/j.jadohealth. 2007.08.018

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