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The Perception of Cyberbullying among Estonian Students According to Cyberbullying Types and Criteria

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Institute of Education, Faculty of Social Sciences, University of Tartu, Estonia

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABELS

LIST OF ABBREVIATIONS

MDS – Multidimensional Scaling
ICT – Information and Communication Technology
MMR – Mixed Methods Research

LIST OF ORIGINAL PUBLICATIONS

This dissertation is based on the following original publications, which are referenced in the text by their Roman numerals (Articles I–III):

I Naruskov, K., Luik, P., Nocentini, A., & Menesini, E. (2012). Estonian Students' Perception and Definition of Cyberbullying. *TRAMES: A Journal of the Humanities & Social Sciences, 16*(4), 323−343. https://doi.org//10.3176/tr.2012.4.02

II Naruskov, K., & Luik, P. (2015). Küberkiusamise fenomeni tajumine Eesti õpilaste seas: sooline võrdlus kiusamise kriteeriumite ja liikide alusel. *Eesti Haridusteaduste Ajakiri, nr 3*(2), 186–215. http://dx.doi.org/10.12697/eha.2015.3.2.07

III Luik, P. & Naruskov, K. (2018). *Student's Perceptions of Cyberbullying in the Context of Cyberbullying Criteria and Types: The Role of Age*. Paper presented at the 7th International conference on Learning Technology for Education Challenges, Žilina, Slovakia. Springer, Cham. https://doi.org//10.1007/978-3-319-95522-3_3

Author contributions:
This dissertation uses the methodology from the project "COST ACTION IS0801 Cyberbullying: coping with negative and enhancing positive uses of new technologies, in relationships in educational settings." The author contributed to the publications as follows:

For Article I: Participating in the development of the questionnaire. Adapting the COST ACTION IS0801 methodology into Estonian settings, formulating the research questions, adapting the interview guide used during the focus group interviews, adapting the questionnaires into Estonian settings, formulating the research questions, planning and carrying out data collection and analysis, writing the paper as the main author.

For Article II: Formulating the research questions, planning and carrying out data collection and analysis, writing the paper as the main author.

For Article III: Participating in the formulation of the research questions, planning and carrying out data collection and analysis, writing the paper in cooperation with Piret Luik.

Related papers:

Menesini, E., Nocentini, A., Palladino, B. E., Frisén, A., Berne, S., Ortega-Ruiz, R., ... Smith, P. K. (2012). Cyberbullying definition among adolescents: A comparison across six European countries. Cyberpsychology, Behavior, and Social Networking, 15(9), 455−463. https://doi.org//10.1089/cyber.2012.0040

Menesini, E., Nocentini, A., Palladino, B. E., Scheithauer, H., Schultze-Krumbholz, A., Frisén, A., . . . Blaya, C. (2013). Definitions of cyberbullying. In K. P. Smith, & G. Steffgen (Eds.), *Cyberbullying through the New Media: Findings from an International Network* (pp. 23–36). Great Britain: Taylor and Francis. https://doi.org//10.4324/9780203799079

Berne, S., Frisén, A., Schultze-Krumbholz, A., Scheithauer, H., Naruskov, K., Luik, P., Katzer, C., Erentaite, R., & Žukauskienė, R. (2013). Cyberbullying assessment instruments: A systematic review. *Aggression and Violent Behavior*, 18(2), 320−334. https://doi.org//10.1016/j.avb.2012.11.022

Frisén, A., Berne, S., Schultze-Krumbholz, A., Scheithauer, H., Naruskov, K., Luik, P., ... Zukauskiene, R. (2013). Measurement issues: A systematic review of cyberbullying instruments. In K. P. Smith, & G. Steffgen (Eds.), *Cyberbullying through the New Media: Findings from an International Network* (pp. 37–62). Great Britain: Taylor and Francis. https://doi.org//10.4324/9780203799079

Palladino, B. E., Menesini, E., Nocentini, A., Luik, P., Naruskov, K., Ucanok, Z., … Scheithauer, H. (2017). Perceived severity of cyberbullying: Differences and similarities across four countries. *Frontiers in Psychology*, *8*(SEP). https://doi.org//10.3389/fpsyg.2017.01524

1. INTRODUCTION

1.1 Research problem

The digital generation, the internet generation, Google and Facebook generation – these are the terms we use to describe people born since constant online status has been an integral part of normal life. The digital experience has changed how and when people communicate (Kowalski, Limber, & McCord, 2019; Sticca & Perren, 2013; Suler, 2005). The results of the EU Kids Online 2018 survey showed that 97% of Estonian children aged 9–17 use the internet daily, mainly for entertainment or social networking (Sukk & Soo, 2018). In 2010, the percentage of internet users among Estonian students was 82, and so the number of internet users has clearly grown rapidly over the past eight years (Livingstone, Haddon, Görzig, & Ólafsson, 2011; Sukk & Soo, 2018). The study conducted with teenagers from the United States of America showed that the widespread use of smartphones has led to a situation where 24% of teens go online "almost constantly" (Lenhart, 2015).

The cyber world offers many benefits, and Estonia is a country that sets a good example in this area. At the same time, the downsides of the cyber world have emerged, and this has also affected children and adolescents. The qualities that make cyberspace attractive and appealing to them are also sources of pain and stress (Underwood & Ehrenreich, 2017). Bullying has moved online where it has become more destructive because social norms that work in face-to-face interaction do not work online and are easily ignored by the bullies (Blumenfeld, 2013).The EU Kids Online survey found that 67% of Estonian children have experienced incidents that could be considered as cyberbullying and the alarming sign is that 36% of these children did not share their experiences with anyone (Sukk & Soo, 2018). In the United Kingdom, Bryce and Fraser (2013) conducted 18 focus groups interviews with young people aged 9–19. The results showed that participants accepted cyberbullying as a normative dimension of their online interaction, which was considered serious but also a routine and inevitable phenomenon (Bryce & Fraser, 2013). Cyberbullying might have serious consequences; for instance, it has been associated with a higher risk of mental health problems (Blumenfeld, 2013). A study conducted in 2015 with Estonian students from grades 5 to 9 (N=2048) aimed to detect bullying types that are more harmful (physical bullying, verbal bullying, relational bullying, cyberbullying) to the students' mental well-being (Mark, Värnik, & Sisask, 2019). The results showed that cyberbullying was considered the most devastating form of bullying (Mark et al., 2019). Several studies have found that cyberbullying is associated with the symptoms of depression (Gámez-Guadix, Orue, Smith, & Calvete, 2013; Gradinger, Strohmeier, & Spiel, 2009; Tokunaga, 2010) and suicidal thoughts (Gini & Espelage, 2014; van Geel, Vedder, & Tanilon, 2014).

The concept of cyberbullying is often paralleled with and defined based on the definition of traditional bullying. In the early 1970s, Dan Olweus was the first to

define bullying and in his later works he continued to clarify the definition and its components (Olweus, 1993; Olweus, 1999). This definition has remained the most common definition of bullying in scientific research (Volk, Dane, & Marini, 2014). According to Olweus, there are three important criteria that have to be present in order to define a behaviour as bullying: *intent to harm*, *an imbalance of power*, *repetition* (Olweus, 1993; Olweus, 1999). Many definitions of cyberbullying contain one or more of the criteria from traditional bullying and in order to connote the context, reference to the cyber-environment is added to the definitions (Hinduja & Patchin, 2008; Smith et al., 2008). At the same time, researchers acknowledge that the environment in which cyberbullying takes place is different in nature (Chisholm & Day, 2013; Dooley, Pyżalski, & Cross, 2009; Kowalski, Limber, & Agatston, 2008; Kowalski et al., 2019; Langos, 2012; Menesini & Nocentini, 2009; Slonje & Smith, 2008). Thus, it is proposed that the three criteria suggested by Olweus (1999) may not be so clearly distinguishable or even relevant at all when defining cyberbullying (Mehari, Farrell, & Le, 2014; Menesini & Nocentini, 2009; Patchin & Hinduja, 2015; Shariff, 2008; Slonje & Smith, 2008). Consequently, researchers of cyberbullying suggest that there might be some cyber-specific criteria; for instance, *anonymity* and *publicity*, which could describe bullying that occurs in the cyber world more accurately (Menesini & Nocentini, 2009; Nocentini et al., 2010; Slonje & Smith, 2008; Smith et al., 2008; Sticca & Perren, 2013). Still, it seems that there is uncertainty and at the same time a lack of research on how to define cyberbullying based on traditional bullying criteria and what role the two cyber-specific criteria play in that context. A systematic review by Berne et al. (2013) illustrates the lack of consistency regarding how cyberbullying should be defined in instruments. In this study, the psychometric properties of 44 instruments used to measure cyberbullying were analysed. The study showed that cyberbullying was defined differently based on the criteria suggested by previous authors (Berne et al., 2013). The systematic review showed that almost half of the instruments did not use the concept cyberbullying. Still, many of the authors acknowledge that their instruments do measure it. Instead, the terms "cyber-harassment", "internet harassment" and "electronic bullying" were used in the instruments (Berne et al., 2013). Mehari, Farrell, and Le (2014) have reached a similar conclusion by referring to the pluralism of the terms used in cyberbullying research, which is an indicator of the inconsistency, and conclude that although cyberbullying is the most commonly used term, this concept often includes a broad range of aggressive behaviours that do not fit with a strict definition of bullying. Therefore, it is currently unclear what construct is measured with existing cyberbullying instruments (Thomas, Connor, & Scott, 2015; Tokunaga, 2010) and the quality of the existing instruments is low (Selkie, Fales, & Moreno, 2016). The definitions used in instruments affects how the participants respond to the measurement items (Tokunaga, 2010). The differences among the definitions used in instruments may be the reason why studies on cyberbullying have shown inconsistent findings in terms of the incidences of bullies and victims and age and gender differences. For instance, the systematic review by Selkie et al. (2016) found that the prevalence of cyber-victimization

ranged between 3% and 72%. In regard to the perpetration of cyberbullying, the rates ranged from 1 to 41% and for cyberbully-victims from 2.4 to 16.7% (Selkie et al., 2016). Understanding the nature of bullying is the basis for designing and implementing effective bullying prevention and intervention programs (Treial, 2016). In conclusion, to establish validity in measurements it is crucial to have a considerable level of agreement among scholars when defining the phenomenon of cyberbullying because without a clear and uniformly applied definition it is difficult to deeply understand, measure and prevent the phenomenon (Thomas, Connor, & Scott, 2015; Tokunaga, 2010; Volk et al., 2014), and this dissertation attempts to contribute to this.

For the valid measurement of the phenomenon, it is crucial that researchers and practitioners understand the phenomenon on a similar basis. Studies of traditional bullying (Smith et al., 2002; Vaillancourt et al., 2008) as well as cyberbullying (Moreno, Suthamjariya, & Selkie, 2018) have shown that children and young people do not perceive the definitions as presented by the researchers. This raises validity concerns. From time to time researchers have pointed out the need to take student perceptions into account when defining and understanding cyberbullying, but have also come to the conclusion that the topic needs further investigation (Grigg, 2010; Menesini et al., 2012; Mishna, Saini, & Solomon, 2009; Moreno et al., 2018; Nocentini et al., 2010; Tokunaga, 2010; Vandebosch & Van Cleemput, 2008). This topic is important when it comes to child-parent/teacher relationships because situations where children and parents/teachers do not have a shared understanding of the concept of bullying can cause miscommunication and make it more difficult to intervene and deal with the issue (Monks & Smith, 2006). For instance, there are several ways to inflict harm in cyberspace (Blumenfeld, 2013; Kowalski et al., 2008; Willard, 2007). This dissertation concentrates on the classification suggested by Nocentini et al. (2010). According to this approach, there are four different types of cyberbullying behaviours: written-verbal behaviours, visual behaviours, impersonation, and exclusion (Nocentini et al., 2010). It is unclear whether adolescents also perceive all of these behaviours as cyberbullying and how they evaluate the severity of the different types of behaviours (Nocentini et al., 2010). This knowledge would contribute to understanding important aspects of the cyber lives of adolescents and highlight those topics where adult help and guidance is needed to cope with the peculiarities of cyber communication.

The topic of the severity of cyberbullying is also important when we want to understand how the phenomenon is perceived by students (Palladino et al., 2017; Sticca & Perren, 2013). Perceived severity is an individual's implicit perception of the bullying behaviour which is recognized based on the harm it causes to them or to others (Chen, Cheng, Wang, & Hsueh, 2015). Scholars have emphasized that the topic of severity in cyberbullying has received poor attention in previous research (Palladino et al., 2017; Sticca & Perren, 2013). This issue is important for understanding help-seeking behaviour in students and their coping strategies when experiencing cyberbullying (Sticca & Perren, 2013). For example, knowing how students perceive the seriousness of different types of cyberbullying and to

acknowledge that seemingly harmless bullying acts actually have a huge impact on victims helps to raise the awareness of peers, parents, and teaching staff of situations where intervention is needed to reduce the likelihood of bullying (Sticca & Perren, 2013). Research has also shown that gender and age may influence the cyberbullying construct, its severity and/or its effects are perceived (Ackers, 2012; Frisén, Berne, & Marin, 2014; Sittichai & Smith, 2018; Slonje, Smith, & Frisén, 2017). But this topic has also received little attention in previous studies in terms of the criteria and types of behaviour. For instance, in the context of the definition and measurement of cyberbullying behaviour, Thomas et al. (2015) conclude that the age factor is poorly targeted and needs further investigation to ensure that items used in cyberbullying scales are age appropriate.

Thomas et al. (2015, p. 139) have written that "*The quality of understanding young people's experiences with bullying (victimization and perpetration) relies on the ability to effectively assess the construct."* Considering the large variability of the definitions and measures of the construct in different studies in the field of cyberbullying, it is important to investigate how similar students perceptions of cyberbullying are to the operationalized definition and understanding of cyberbullying among researchers. Studying Estonian students from this perspective can provide important information for understanding the phenomenon of cyberbullying, since Estonian students are among the most active and risky internet users in Europe, and have experienced almost twice as much cyberbullying as children in other European countries (Livingstone & Haddon, 2009). In conclusion, to contribute to theory building, improve the measurement of cyberbullying behaviour, and provide valuable information for preventing bullying and for intervention programmes, it is important to understand how the criteria of the definition of cyberbullying and the types of cyberbullying behaviour fit with how students understand cyberbullying and their evaluations of its severity considering the factors of gender and age.

1.2 Focus of the research

The thesis aims to examine how Estonian students perceive cyberbullying in the context of cyberbullying criteria (intentionality, an imbalance of power, repetition, publicity, and anonymity) and the type of cyberbullying behaviour (written-verbal, visual, exclusion, and impersonation), and whether there are differences related to age and gender. This aim was approached using the following research questions:

- **RQ 1:** What is the best term to label scenarios describing different situations or behaviours that could be considered cyberbullying?
- **RQ 2:** Which criteria of cyberbullying behaviour are relevant for Estonian students in labelling cyberbullying behaviour and evaluating the severity of the scenarios?

- **RQ 3:** What types of cyberbullying behaviour are relevant for Estonian students in labelling cyberbullying behaviour and evaluating the severity of the scenarios?
- **RQ 4:** What are the differences between Estonian boys' and girls' perception of the cyberbullying phenomenon in the context of five cyberbullying criteria and four cyberbullying types?
- **RQ 5:** What differences exist in the perception of the cyberbullying phenomenon between Estonian students aged 12–13 and 15–16 years of age in the context of five cyberbullying criteria and four cyberbullying types?

To accomplish this aim and to find answers to the research questions, a mixed-method approach was used consisting of focus groups and a questionnaire; in both cases more specific aims and research questions were posed. The proposed research questions (1–5) are addressed in the following original publications:

Article I addresses research questions 1–3. Using a multidimensional scaling approach (MDS) the role of five definitional criteria for cyberbullying are systematically investigated considering the four types of cyberbullying behaviour. Focus group results target the term and labelling issues and the perception of severity across five cyber-bullying criteria and four types of cyberbullying behaviour.

Article II contributes to answering research question 4. This article targets the age difference and explores how Estonian boys and girls perceive the concept of cyberbullying on the basis of the five cyberbullying criteria and four types of cyberbullying behaviour.

Article III contributes to answering research question 5. This article concerns the age differences and explores how the two age groups (students 12–13 and 15–16 years of age) perceive the concept of cyberbullying based on the five cyberbullying criteria and four types of cyberbullying behaviour.

2. THEORETICAL BACKGROUND

The following chapter provides an overview of the theoretical outline of the doctoral study. Firstly, an overview of the concepts of bullying and cyberbullying are given. This is followed by an overview of the five criteria and four types of cyberbullying behaviour. The last two sections of the theoretical chapter provide an overview of the gender and age issues in the context of cyberbullying.

2.1 Historical perspective of cyberbullying research

A person may be exposed to bullying in multiple contexts during childhood, adolescence, and adulthood (Monks et al., 2009). Bullying can happen in schools, between siblings, in children's residential care homes, in prisons, and in the workplace (Monks et al., 2009) For instance, recent studies in Estonia have focused on bullying and cyberbullying that is happening in the workplace, more precisely among university faculty members (Meriläinen, Käyhkö, Kõiv, & Sinkkonen, 2019; Meriläinen & Kõiv, 2019). Still, most attention has been paid to investigate school bullying (Smith, 2016a; Smith, 2016b). Although cyber-bullying can happen outside of schools, the majority of studies on cyberbullying have been conducted on school students (Tokunaga, 2010). In Estonia, three periods can be distinguished in the research of school bullying (Kõiv, 2009). According to Kõiv (2009) the time before mid-1990s was the period when bullying was acknowledged and given a name, but it did not receive widespread attention in educational programs and there was a lack of clarity in terms of definition as well. From mid-1990s to mid-2000s the definition of bullying was more clearly formed and the growing body of research mainly focused on the nature and prevalence of bullying that was happening between students. During the mid-2000s to date bullying is acknowledged as a social problem in our society and in schools and this has led to a greater interest in investigating the phenomenon in more depth (Kõiv, 2009). The phenomenon of cyberbullying appeared within the third period of this time frame. With the emergence of the phenomenon of cyberbullying, the term bullying is now also labelled "face-to-face", "real life", "traditional, "in-person" and "offline bullying" for differentiation purposes (Blumenfeld, 2013). In the theoretical background of this dissertation the terms "bullying" and "traditional bullying" are used to refer to bullying incidents occurring in real life contexts in contrast to bullying incidents taking place online, which is labelled "cyberbullying".

According to Smith (2016a, 2016b) the 21st century has so far been the age of cyberbullying awareness. The number of publications on bullying, especially school bullying, has increased exponentially since the mid-2000s, and this is in part due to the emergence of the phenomenon of cyberbullying (Smith, 2016a). Mehari et al. (2014) acknowledges that the founder of bullying.org, Bill Belsey, was the one who suggested the term *cyberbullying*. The first articles marked with

the subject term cyberbullying were published in 2006 by Justin W. Patchin and Sameer Hinduja (2006) and Qing Li (2006). Since the author of this dissertation began researching cyberbullying around the same time as the cyberbullying phenomenon was evolving, defending her bachelor thesis in 2007 and master's thesis in 2009, then the search for scientific literature on cyberbullying began over ten years ago by reading the original sources on cyberbullying, and since then the searches in scientific databases have followed the specific interest of the author, focusing on measurement and definition in doctoral studies.

Using the term "cyberbullying", EBSCOhost outputs over 3,500 articles published in academic journals (17.11.2019). Based on her narrative review, Baldry et al. (2015) concluded that the cross-sectional approach has mainly been used in the study of cyberbullying. In qualitative research, individual interviews (Dredge, Gleeson, & de la Piedad Garcia, 2014; Ševčíková, Šmahel, & Otavová, 2012) and as well as focus group interviews (Bryce & Fraser, 2013; Mishna et al., 2009; Nocentini et al., 2010; Vandebosch & Van Cleemput, 2008) have been used to collect data. There have also been some mixed methods studies in the field of cyberbullying (Mishna et al., 2016; Slonje et al., 2017). In quantitative research, the most widespread data collection method is questionnaire (Chen & Cheng, 2017; Frisén et al., 2014; Kim, Kata, Boyle, Georgiades, & Colwell, 2018; Slonje & Smith, 2008; Sorrentino, Baldry, Farrington, & Blaya, 2019), including both single-item and multiple-item measures (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). Berne et al. (2013) found that most of the instruments included in a systematic review of instruments measuring cyberbullying were designed to be administered as self-reporting instruments. In the early years, the focus of cyberbullying research was primarily on identifying the proportion of bullies and victims and the types and means by which cyberbullying was carried out (Kowalski & Limber, 2007; Patchin & Hinduja, 2006; Slonje & Smith, 2008; Smith et al., 2008). Soon, the topic of defining and measuring cyberbullying emerged (Berne et al., 2013; Gradinger, Strohmeier, & Spiel, 2010; Menesini & Nocentini, 2009; Menesini et al., 2012; Pieschl, Porsch, Kahl, & Klockenbusch, 2013) and this issue has remained topical until now (Kofoed & Staksrud, 2019; Moreno et al., 2018; Peter & Petermann, 2018).

The most recent studies focusing on the definition and measurement of cyberbullying have looked at the perspective of both adolescents/young adolescents and adults (Moreno et al., 2018), as well as researchers (Peter & Petermann, 2018). Moreno et al. (2018) used two open-ended prompts in their study to understand community stakeholder perceptions of typical cyberbullying cases and to evaluate how these case descriptions align with the components of the Uniform Definition of bullying developed under the leadership of the Centres for Disease Control and Prevention and the U.S. Department of Education. Peter and Petermann (2018) tried to define cyberbullying based on the attributes most frequently used by previous cyberbullying researchers in their instruments. Although defining and measuring cyberbullying has received a lot of attention in recent studies there is still little consensus on the general definition of this problem (Palladino et al., 2017).

2.2 Defining Traditional Bullying and Cyberbullying

Dan Olweus has defined bullying as, *aggressive, intentional acts carried out by a group or an individual repeatedly and over time against a victim who cannot easily defend him or herself* (Olweus, 1993, p. 48). Several researchers have pointed out that there is a need to update or supplement the definition of bullying (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014; Volk et al., 2014). For instance, the Uniform Definition of Bullying was proposed under the leadership of the Centres for Disease Control and prevention and the U.S. Department of Education (Gladden et al., 2014, p. 7): "*Bullying is any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involves an observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated. Bullying may inflict harm or distress on the targeted youth including physical, psychological, social, or educational harm.*" It can be seen from the definition that several elements of Olweus' (1993) definition are emphasized in it, but at the same time some elements have been added.

In short, bullying is a sub-type of aggressive behaviour that must meet three criteria: *intent to harm, imbalance of power, repetition* (Olweus, 1999). Aggression is any behaviour that is carried out with the intention to cause harm to another individual *who does not wish to be harmed* (Anderson & Bushman, 2002; Baron & Richardson, 1994). It is possible to conceptualise aggressive behaviour based on the form of aggression by distinguishing physical (e.g. hitting or pushing the other, physical threats and assaults), verbal (yelling, screaming, name calling etc.) and relational (intentionally harming and damaging another person's social relationships) aggression (Crick & Grotpeter, 1995; Mehari et al., 2014; Stangor, 2014). According to Barlett and Coyne (2014), bullying can be physical and non-physical (verbal and relational). Olweus (1999) distinguishes between direct bullying (open attacks on the victim) and indirect bullying (social isolation and exclusion). Physical bullying and verbal bullying are recognised as a direct form of bullying and relational bullying as an indirect form of bullying (Wang, Iannotti, & Nansel, 2009). Blumenfeld (2013) acknowledges that cyberbullying is a new variation of bullying behaviour that has emerged with advanced information and social communication technologies. According to Barlett and Coyne (2014), cyberbullying occurs through non-physical methods. Mehari et al. (2014) propose a multidimensional model of aggression that describes the form of aggression (physical, verbal, relational) and the medium (in-person or cyber), which means that verbal and relational forms of aggression can be exacted in person or through online media (e.g. relational cyberbullying).

Meta-syntheses and systematic reviews on cyberbullying have shown that there is a lack of consensus on how to label, define and conceptualize the phenomenon of cyberbullying (Berne et al., 2013; Kowalski et al., 2014; Peter & Petermann, 2018; Tokunaga, 2010). It can be seen from Table 1 that the definition of cyberbullying has been operationalized differently in studies. Some cyberbullying researchers simply add the cyber environment dimension to the concept

of bullying (Li, 2008). Many definitions contain references to aggressive behaviour (Kowalski, Morgan, Drake-Lavelle, & Allison, 2016; Smith et al., 2008; Wang et al., 2009).

Table 1. Definitions of cyberbullying

Study	Definition of cyberbullying behavior
Patchin & Hinduja (2006, p. 152)	Willful and repeated harm inflicted through the medium of electronic text.
Kowalski et al. (2016, p. 416)	An act of aggression that is often repeated over time (e.g., a single message posted where thousands of people can view it), and that occurs among individuals whose relationship is defined by a power imbalance.
Li (2008, p. 224)	Bullying via electronic communication tools such as email, cell phone, Personal Digital Assistant, instant messaging or the World Wide Web.
Peter & Petermann (2018, p. 358)	Cyberbullying is using information and communication technologies (ICT) to repeatedly and intentionally harm, harass, hurt and/or embarrass a target.
(Slonje, Smith, & Frisén, 2013)	A systematic abuse of power which occurs through the use of information and communication technologies (ICTs).
Smith et al. (2008, p. 376)	An aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself.
Tokunaga (2010, p. 278)	Cyberbullying is any behaviour performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others.
Wang (2009, p. 369)	A form of aggression that occurs through personal computers (e.g., e-mail and instant messaging) or cell phones (e.g., text messaging).

The formulation of cyberbullying by Smith et al. (2008) is more specific, consisting of all three criteria from Olweus, and has gained greater recognition and use among researchers. However, the debate on how the three traditional bullying criteria fit the cyber environment and whether and factors specific to the online context should be incorporated into the definition of cyberbullying and how is ongoing (Peter & Petermann, 2018). Based on the results of his meta-synthesis, Tokunaga (2010) acknowledges the need for an integrative definition of cyberbullying. Tokunaga (2010) provides a definition that unites the previous inconsistent definitions (Table 1). Although, the definition makes no reference to cyber-specific criteria, Tokunaga (2010, p. 278) suggests an addendum to this definition to clarify what is meant by cyberbullying for research participants: "*In the cyberbullying experience, the identity of the bully may or may not be known.*

Cyberbullying can occur through electronically-mediated communication at school; however, cyberbullying behaviours commonly occur outside of school as well." This may be one of the first efforts to combine the criteria of traditional bullying with the criteria specific to cyberbullying. Still, the definition by Tokunaga (2010) is relatively narrow focusing only on messages and excluding many other possible methods of cyberbullying; for instance, cyberbullying through pictures and videos. In a recent study, Peter and Petermann (2018) investigated cyberbullying definitions that were developed in the past six years (2012–2017) and conclude that the definitions provided by Smith et al. (2008), Tokunaga (2010) and Patchin and Hinduja (2006) are the most cited definitions. The problem is that these three definitions describe the phenomenon with varying degrees of accuracy and contain different defining attributes (Peter & Petermann, 2018). In their study Peter and Petermann (2018) did not use the term criteria, but instead differentiated between *concept*, *defining attributes* and the *definition* of cyberbullying. According to Peter and Petermann (2018), the *concept* is the broad framework of cyberbullying, which includes defining, influencing and moderating attributes and also reflects how the attributes interact and connect with each other. *Defining attributes* are the broad range of characteristics that previous researchers have used in publications to define cyberbullying. *The definition* includes only the main defining attributes of cyberbullying that were present in all studies that Peter and Petermann (2018) analysed.

2.2.1. Criteria of Cyberbullying

Figure 1 visualizes the five criteria of cyberbullying, three of these originating from the definition of traditional bullying proposed by Olweus (1999) and the last two being cyber-specific criteria that could describe bullying that occurs in the cyber world more accurately (Menesini & Nocentini, 2009; Nocentini et al., 2010; Slonje & Smith, 2008; Smith et al., 2008; Sticca & Perren, 2013).

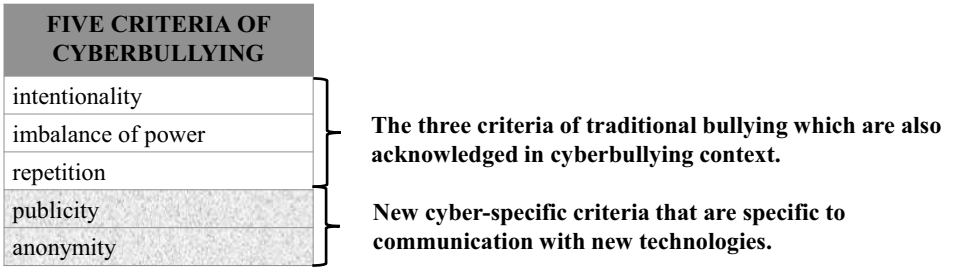

Figure 1. The five criteria of cyberbullying behaviour

Many existing definitions of cyberbullying include one or more of the criteria from the traditional definition of bullying proposed by Olweus (1993). At the same time, there is uncertainty on how and to what extent these criteria apply in the cyber environment (Mehari et al., 2014; Menesini & Nocentini, 2009; Patchin & Hinduja, 2015; Shariff, 2008; Slonje & Smith, 2008). We may ask, how is the imbalance of power accomplished in a cyber environment? Can we consider instances where a bully posts something on the internet once, which then spreads to tens, hundreds or thousands of internet users as a repetitive act or not? How can we deal with intentionality in an environment where it is actually difficult to determine the intentions of communication partners? Due to the specific nature of the cyber environment, cyber-specific criteria are proposed (Menesini & Nocentini, 2009; Nocentini et al., 2010; Slonje & Smith, 2008; Smith et al., 2008; Sticca & Perren, 2013). Chisholm and Day (2013) sum up the peculiarities of cyberbullying, which also reflects the specifics of the cyber environment, by saying that "*the cyberbully can act quickly, anonymously without fear of punishment, before a much larger audience, equally anonymous and unimaginably huge, spanning continents, cultures, nationalities, as well as time*" (p. 36). At the same time, it is notable that even though scholars acknowledge that there might exist some cyber-specific criteria, the results of the systematic review of instruments designed to assess cyberbullying have showed that none of the 44 definitions referred to these criteria (Berne et al., 2013). Together with the three criteria inherited from the definition of traditional bullying suggested by Olweus (1993), the criteria specific to cyberbullying are discussed in more detail below.

2.2.1.1 Intentionality

Intentionality is a criterion common to both bullying and cyberbullying and this means that the behaviour is intended to harm or disturb the victim (Olweus, 1999; Smith, del Barrio, & Tokunaga, 2013). This criterion excludes incidents where the harm was accidentally caused. According to Smith et al. (2013), the intent to harm is quite difficult to detect. For example, sometimes the "victim" may be paranoid (Juvonen, Nishina, & Graham, 2001) and report incidents where no threat or attack is present (Smith et al., 2013). Furthermore, when the perpetrator intends to harm someone, but the attempt somehow fails, or the victim does not perceive the intended harm targeted at him, then it is not clear whether to label this kind of attack as bullying or not. Such aspects may apply in the cyber-context as well. In the cyber-world there is a lack of non-verbal communication and context as cues to understanding the message (Luor, Wu, Lu, & Tao, 2010); therefore, it might be difficult to clearly understand whether the action really intends to hurt somebody or is just a joke (Kowalski et al., 2008; Mehari et al., 2014; Vandebosch & Van Cleemput, 2008). Due to the lack of nonverbal cues such as eye contact, facial expressions and tone of voice, there is the possibility that one adolescent's well-intended behaviour or joke is perceived as hostile, insulting or threatening by another adolescent (Mehari et al., 2014). The results of the study by Bryce and Fraser (2013) revealed that the lack of non-verbal communication

makes it harder for young people to determine the intentions of the perpetrator (e.g. humour or threat).

A systematic review of instruments designed to assess cyberbullying revealed that 40 out of 44 definitions included the criteria of intentionality (intention to harm) and this was the most mentioned criteria in definitions represented in cyberbullying instruments (Berne et al., 2013). North American and Latin American adolescents were asked to read the vignettes and rate the main character's behaviour, they were also asked whether they believed the situation described in the vignette was a case of cyberbullying or not (Talwar, Gomez-Garibello, & Shariff, 2014). The results showed that vignettes containing intention to harm were rated as the most serious and also as incidents of cyberbullying (Talwar et al., 2014). The study by Peter and Peterman (2018) showed that intentionality was one of the five defining attributes that was present in most of the analysed definitions, and therefore should be included to cyberbullying definition. Spanish adolescents also considered intentionality as a defining criterion of cyberbullying (Cuadrado-Gordillo & Fernández-Antelo, 2016). In the study by Moreno et al. (2018), the component of "aggressive behaviour" was the first and the component "inflicts harm" was the third most common component of the Uniform Definition of Bullying that were suggested by adolescents/young adults and adults when describing a typical cyberbullying case. The focus group study by Nocentini et al. (2010) conducted with 70 adolescents from Italy, Spain and Germany showed that intentionality was a highly relevant criterion when labelling an act as cyberbullying, but it was strictly related to the criterion of an imbalance of power. The study by Palladino et al. (2017) revealed that intentionality had an effect on the adolescent's severity assessments only when it was combined with other criteria – anonymity and repetition.

2.2.1.2 Imbalance of power

Bullying and cyberbullying are both about human relationships and about power and control (Blumenfeld, 2013). Bullying includes an imbalance of power, which means that the perpetrator has actual or perceived power over the victim who cannot easily defend him or herself (Olweus, 1999). Power relations are also connected with social norms and group processes – who is in the group, who is out the group (Blumenfeld, 2013). Pieschl et al. (2013) examined the social status of the perpetrator in terms of perceived popularity and they found that this impacts the experience of cyberbullying. In short, cyberbullying by a popular cyberbully was more distressing than being cyberbullied by an unpopular cyberbully (Pieschl et al., 2013). According to "Social Rank Theory", aggressive people often have higher status and power within a social group, and this can motivate those who want to belong to a group to join in with bullying behaviour (Hawker & Boulton, 2001). In this context, a parallel can also be drawn with the Milgram experiment (1965), which showed that people tend to obey authority figures and behave in a way that is contrary to their own morality which might be the case with cyberbullying as well.

In the case of traditional bullying, the imbalance of power means that the bully is physically or mentally stronger than the victim (Olweus, 1999). In the online environment, the imbalance of power is sometimes accomplished by other means. For example, the perpetrator simply owns technological proficiency, knowledge or content (information, pictures, videos) which can be used to carry out the bullying (Blumenfeld, 2013; Kowalski et al., 2014; Notar, Padgett, & Roden, 2013; Patchin & Hinduja, 2015). According to Patchin and Hinduja (2015, p. 71) "*anyone who can utilise technology in a way that allows them to mistreat others is in a position of power—at least at that moment—relative to the target of the attack.*" Moreno et al. (2018) have suggested that in the case of traditional bullying, the power imbalance is achieved using intrinsic characteristic such as physical size, appearance and social status. Controversially, in a cyber environment, the size and status of the bully does not matter because there is free access to the internet and freedom of expression, and so the power imbalance is achieved by extrinsic tools (Moreno et al., 2018).

The imbalance of power may also be reversed in the cyberworld since cyberspace can have an equalizing effect (Blumenfeld, 2013). This means that people who have lower social status or who experience bullying in real life may gain power and higher status in cyberspace and the victim may start bully others on the internet (Blumenfeld, 2013). Psychologists also refer to the "levelling effect" which means that the trigger for cyber-bullying behaviour may be hidden in perpetrator ego problems connected with the bully's internal insecurity (Blumenfeld, 2013).

The study by Berne et al. (2013) showed that out of 44 definitions, only 13 contained the criterion *imbalance of power*. At the same time, this criterion has been considered highly important by researchers of both traditional bullying (Volk et al., 2014) and cyberbullying (Menesini et al., 2012; Palladino et al., 2017). For example, the study conducted with 1,964 adolescents from Italy, Germany, Estonia and Turkey showed that the most important criterion for defining the severity of a cyberbullying scenario was imbalance of power (Palladino et al., 2017). In the study conducted by Talwar et al. (2014) adolescents rated vignettes with the imbalance of power criterion more negatively than the vignettes without this criterion. Furthermore, vignettes with the imbalance of power criterion were more likely to be seen as instances of cyberbullying by the participants (Talwar et al., 2014). In the study by Moreno et al. (2018), the criterion of imbalance of power was the second most common component of the Uniform Definition of Bullying that was suggested by adolescents/young adults and adults when describing a typical cyberbullying case. Spanish adolescents also considered imbalance of power as a defining criterion of cyberbullying (Cuadrado-Gordillo & Fernández-Antelo, 2016). In the study by Peter and Petermann (2018), the criterion of imbalance of power was not treated as a defining attribute, but as an additional influencing factor of cyberbullying.

2.2.1.3 Repetition

The phenomenon of bullying is characterised with the criteria of repetition, which means that the bullying act is carried out "repeatedly and over time" (Olweus, 1999). Researchers who refer to the need to update the bullying definition suggest that a single incident of aggression can be considered bullying when there is a high likelihood of it occurring again, thereby giving a new perspective to the repetition criterion in comparison to how Olweus (1999) expresses it (Gladden et al., 2014). This would support cyberbullying researchers who claim that in the cyber environment, the repetition criterion acquires an additional dimension because even one bullying incident in the cyberworld may result in continued humiliation for the victim (Dooley et al., 2009; Gámez-Guadix et al., 2013; Patchin & Hinduja, 2015; Slonje & Smith, 2008; Slonje et al., 2013; Underwood & Ehrenreich, 2017). For instance, once a harassing video or picture has been uploaded, it can be shared with other internet users, and may be accessible to many internet users for a very long time (Kim et al., 2018; Shariff, 2008; Slonje & Smith, 2008; Slonje et al., 2013; Vandebosch & Van Cleemput, 2008), Therefore, it is difficult to define repetition in the cyber environment (Pieschl et al., 2013; Smith et al., 2013). Therefore, the power of technology must be taken into consideration because it seems that in the cyber context it is not relevant to simply count the bullying acts in order to classify the act as bullying behaviour, and therefore the question of how to measure the repetition in the cyber environment is still unanswered.

The systematic review of instruments designed to assess cyberbullying revealed that 25 of the 44 definitions included the criteria of repetition (Berne et al., 2013). Researchers have pointed to a situation where in the context of repetition the cyberbullying is not measured on the same basis – in some studies the cyberbullying has been measured with the "repetition" criteria and in another studies without it (Baldry, Farrington, & Sorrentino, 2015; Tokunaga, 2010). This has led to a situation where it is difficult to reach common conclusions and to make cross-cultural comparisons, but it has been admitted that there must be some level of agreement among researchers (Baldry et al., 2015; Tokunaga, 2010). The study by Peter and Peterman (2018) showed that repetition was one of the five defining attributes present in most of the analysed definitions, and therefore should be included to cyberbullying definition. At the same time, repetition was one of the least frequently mentioned components of the Uniform Definition of bullying (Moreno et al., 2018). The focus group study by Nocentini et al. (2010) showed that the criterion of repetition was important to adolescents when defining behaviour as cyberbullying because on this basis it is possible to distinguish whether the act was a joke or an intentional attack. Similarly, the study by Palladino et al. (2017) showed that repetition had an effect on adolescent severity assessments when combined with the criterion of intentionality.

2.2.1.4 Publicity

Publicity is a specific criterion of cyberbullying (Kowalski et al., 2014; Menesini & Nocentini, 2009; Menesini et al., 2012; Slonje & Smith, 2008). The cyberworld offers perpetrators tools and opportunities to bully in front of a wide audience reaching up to thousands of bystanders and witnesses (Kowalski et al., 2014). In the study by Bryce and Fraser (2013), students acknowledged that the public nature of computer-mediated communication creates new opportunities for victimization. Consequently, studies have shown that the public-private dimension is important to students in the context of how cyberbullying and its impact is perceived (Dredge et al., 2014; Slonje & Smith, 2008; Slonje et al., 2017; Smith et al., 2008; Sticca & Perren, 2013). Smith et al. (2008) found that cyberbullying was more severe for students than traditional bullying because a large audience can witness it if it is on the internet. Public forms of cyberbullying are considered to have a more negative impact in comparison with traditional bullying (Slonje & Smith, 2008; Smith et al., 2008). The study by Slonje and Smith (2008) showed that situations where students did not have an overview of who had seen the image on the internet made them worried. Sticca and Perren (2013) conducted research with Swiss students (grades 7 and 8) and found that the participants perceived public scenarios as worse than private ones. Similarly, Dredge et al. (2014) conducted interviews with 25 adolescents aged between 15–24 years. The researchers found that publicity amplified the impact of cyberbullying for students who had experienced cyberbullying via social networking sites (Dredge et al., 2014). In the context of Estonia, the EU Kids Online study (Sukk & Soo, 2018) showed that 25% of Estonian students who had experienced incidents that could be considered cyberbullying admitted that others had sent nasty or insulting messages about them to each other or the messages were uploaded to places where others could see them. This was the third most mentioned way of experiencing incidents that could be considered cyberbullying in the EU Kids Online study (Sukk & Soo, 2018). Spanish adolescents considered publicity, named as advertising in this study, as a defining criterion of cyberbullying (Cuadrado-Gordillo & Fernández-Antelo, 2016). The focus group study by Nocentini et al. (2010) showed that the criterion of publicity was not relevant for labelling a behaviour as cyberbullying but at the same time it was relevant to determine the severity of the attack. On the contrary, the study by Palladino et al. (2017) showed that the publicity criterion had no effect on adolescent severity assessments. To some extent the issue of publicity interacts with repetition. The focus group study by Nocentini et al. (2010) showed that participants from Italy and Germany considered a public bullying incident that occurred once as having been done several times because in the case of public cyberbullying many people witness the act.

2.2.1.5 Anonymity

Although traditional bullies can also use anonymous tactics, the perception of anonymity is greater online (Barlett, Heath, Madison, DeWitt, & Kirkpatrick, 2019), and therefore anonymity is considered to be specific criteria in the cyber-bullying context (Mehari et al., 2014; Menesini & Nocentini, 2009; Nocentini et al., 2010; Slonje & Smith, 2008; Smith et al., 2008; Sticca & Perren, 2013). In the cyber-environment, anonymity can be interpreted in many ways (Barlett, 2015): a) the use of aliases and shielded screennames creates a situation where it is difficult to identify the aggressor; b) the bully and the victim do not have to be familiar with each other; c) bullying in cyberspace does not create physical scars or marks inflicted by the bully (Barlett, 2015). Furthermore, cases where the bully breaks into a victim's account with the intention of impersonating the account owner and placing him/her in an unpleasant situation can also be considered a form of anonymous act.

The anonymous nature of the internet allows the bully to remain seemingly unknown to the victim using very simple means (Blumenfeld, 2013; Kim et al., 2018), and this may cause anger, a feeling of insecurity and powerlessness in the victim because it is hard to fight with an enemy you or even others cannot identify (Dooley et al., 2009; Kowalski et al., 2019; Mehari et al., 2014; Slonje & Smith, 2008; Willard, 2007). At the same time, the bully does not receive adequate feed-back on his behaviour on the internet because he does not see the immediate emotion of the victim or understand the consequences of his behaviour (Blumenfeld, 2013; Chisholm & Day, 2013; Juvonen & Gross, 2008; Kim et al., 2018; Kowalski et al., 2008; Mehari et al., 2014; Slonje & Smith, 2008). When trying to explain how people experience themselves and others in cyberspace, Suler (2004) uses the term "online disinhibition effect" which means that the anonymous nature of cyberspace creates situations where people experience fewer behavioural inhabitations than in real-life. This phenomenon has a negative side known as "toxic disinhibition" which means that because of the anonymity people communicate more objectionable needs and desires (Blumenfeld, 2013; Suler, 2004) . In the study by Bryce and Fraser (2013), the students who participated in focus group interviews admitted that the disinhibition effect was considered to increase the confidence of the perpetrator and escalated the extremity of online comments and behaviour compared to similar real-life situations. Similarly, Barlett (2015) found that when the perpetrator perceives cyberbullying as anonymous and considers the likelihood of being caught low, then cyberbullying is likely to occur. However, it is important to realize that activities in the cyber-environment are largely traceable and identifiable (Barlett, 2015; Kowalski et al., 2019).

In the study by Peter and Petermann (2018), anonymity was not treated as a defining attribute, but as an additional influencing factor of cyberbullying. Similarly, the focus group study by Nocentini et al. (2010) showed that the criterion of anonymity was not relevant for labelling a behaviour as cyberbullying, but it was still relevant in determining the severity of the attack. Several studies have

shown that the anonymous nature of the cyberworld creates a good platform for cyberbullying behaviour (Ackers, 2012; Barlett, 2015; Kowalski et al., 2008). In the United Kingdom, Ackers (2012) conducted a survey among 325 students from Years 7, 8 and 9 in order to gain insight into how they perceive cyberbullying. Students were asked about the reasons why an individual may bully in the cyber environment rather than face-to-face. Students pointed out three reasons: anonymity, cowardliness, and avoidance of the victim's response. The study by Barlett (2015) showed that the sense of anonymity predicts cyberbullying behaviour and positive attitudes toward cyberbullying. The study by Smith et al. (2008) indicated that students differentiated traditional bullying and cyber-bullying mainly on the basis of the anonymity that most cyberbullying acts entail. Sticca and Perren (2013) conducted research with Swiss students (grades 7 and 8) and found that participants perceived anonymous scenarios as worse than non-anonymous ones. Based on thematic analysis, Dredge et al. (2014) indicated that anonymity is a more complex criterion than expected because anonymity moderates the severity of the impact of cyberbullying in cases where the perpetrator was anonymous and in cases where the perpetrator was known and in a close relationship with the victim. Moreno et al. (2018) found that the component that emerged from participants responses and which was not consistent with the Uniform Definition of Bullying, was anonymity. Although these studies have shown that anonymity is an important criterion in the context of cyberbullying behaviour, the results of the systematic review of instruments designed to assess cyberbullying showed that none of the 44 definitions included the criterion of anonymity (Berne et al., 2013).

2.2.2 Types of Cyberbullying

There are several classifications of cyberbullying behaviour (Blumenfeld, 2013; Kowalski et al., 2008; Nocentini et al., 2010; Willard, 2007). For example, Willard's approach includes flaming, harassment, cyberstalking, denigration, impersonation, outing and trickery, and exclusion (Willard, 2007). New types of cyberbullying appear as technology develops and these new types are added to the existing list. For instance, Kowalski et al. (2008) added happy slapping to this list. Blumenfeld's (2013) list of different types of cyberbullying behaviour is more detailed containing 11 different types of cyberbullying behaviour. All the described actions in different approaches could be carried out by the preparator over information and communication technologies such as through web sites, e-mail, mobile phones, instant messaging using words, pictures, and videos (Blumenfeld, 2013; Shariff, 2008).

The current thesis is based on the model by Nocentini et al. (2010), which originated from previous studies (Kowalski et al., 2008; Willard, 2007) and has been experimentally confirmed (Palladino, Nocentini, & Menesini, 2015). The starting point for Nocentini's approach (2010) is the nature of the attack and according to that there are four main types of cyberbullying behaviours, which are presented in Table 2.

Table 2. The four types of cyberbullying behaviour based on Nocentini et al., 2010

Type of behaviour	
Written-verbal	actions that involve bullying acts with written or verbal forms of communication (e.g. phone calls, text messages, e-mail, blogs, skype, social networking sites)
Visual	actions that involves bullying acts with visual means such as pictures and videos (e.g. posting, sending or sharing compromising photos on the internet and via mobile phone)
Exclusion	actions designed to purposefully exclude someone from an online group (e.g. online gaming environment, buddy list)
Impersonation	actions aimed at gaining access to a victim's account in order to steal or reveal personal information about him or her

Some of these types might be perceived as more severe to victims than others. For example, Smith et al. (2008) found that students perceive picture/video clip bullying as the severest type of cyberbullying. Similarly, in the study by Pierschl et al. (2013) cyber victims perceived bullying with videos as more distressing than bullying with texts and this ended up with a negative affect (angry mood) and more planned behaviour (active coping). Menesini et al. (2011) found in Italy that adolescents evaluated silent/prank calls and insults on instant messaging as less severe acts of cyberbullying, the most severe acts were unpleasant pictures/ photos on web sites, phone pictures/photos/videos of intimate scenes, and phone pictures/photos/videos of violent scenes. Visual cyberbullying was considered the most severe type of cyberbullying behaviour also in the study by Nocentini et al. (2010). In terms of impersonation, Bryce and Fraser (2013) found that students were aware that it is possible to compromise their online identities in the cyber environment and they were concerned about the loss of reputation associated with impersonation. At the same time, the study by Nocentini et al. (2010) showed that although Spanish adolescents considered all the four cyberbullying types as cyberbullying, participants from Italy and Germany exhibited some doubt in relation to whether impersonation is a good example of cyberbullying and was considered more as legally relevant or a criminal act.

Adolescents are experiencing exclusion in the cyberworld by constantly seeing highly filtered social media posts of fascinating activities to which they were not invited (e.g. social events, parties) and this may cause sadness, feelings of inadequacy and stress (Underwood & Ehrenreich, 2017). Underwood and Faris (2015) examined social media communication among 216 8th grade students from eight middle schools in the United States – more precisely in Georgia, Indiana, New Jersey, New York, Texas, and Virginia. The results revealed that exclusion by friends caused a significant source of pain according to the participant responses. More specifically, 47% of participants felt excluded at least sometimes and 36% of participants admitted that at least sometimes they had

made posts that could have caused someone to feel excluded (Underwood & Faris, 2015). Social exclusion via social media is a highly subtle form of social aggression since on the surface the post may seem innocent sharing while at the same time creates a feeling of exclusion among others (Underwood & Faris, 2015). Furthermore, social exclusion is effective because it is highly public, but since the excluded ones are reluctant to say anything, it is also hidden, and therefore may not be noticed even by parents who are interested in the child's social and digital life (Underwood & Faris, 2015; Underwood & Ehrenreich, 2017).

2.3 The Role of Gender in Cyberbullying

Narrative reviews, critical reviews and meta-analyses of cyberbullying has shown that gender has been considered a possible predictor of cyberbullying behaviour (Baldry et al., 2015; Barlett & Coyne, 2014; Kowalski et al., 2014; Tokunaga, 2010). In general, studies have demonstrated inconsistent findings in predicting either cyberbullying or cyber victimization (Baldry et al., 2015; Kowalski et al., 2014; Tokunaga, 2010). There are studies which have shown that boys are more related to cyberbullying as bullies (Erdur-Baker, 2010; Huang & Chou, 2010; Lapidot-Lefler & Dolev-Cohen, 2015) and girls as cyber victims (Holt, Fitzgerald, Bossler, Chee, & Ng, 2016; Sourander et al., 2010). Kowlaski and Limber (2007) found that girls are more involved as both cyber victims and cyberbullies. There are also studies that have shown that boys experience more cyberbullying as victims compared to girls (Erdur-Baker, 2010; Zhou et al., 2013). Based on his critical review and synthesis of research on cyberbullying behaviour, Tokunaga (2010) concluded that in the majority of studies gender does not determine the cyber victimisation (Hinduja & Patchin, 2008; Juvonen & Gross, 2008; Williams & Guerra, 2007). But if gender differences were found in the context of the cyberbullying behaviour it seems that in the majority of studies boys are more involved as cyberbullies and girls as cyber victims (Baldry et al., 2015; Tokunaga, 2010).

The type of cyberbullying behaviour (Menesini, Nocentini, & Calussi, 2011; Sorrentino et al., 2019) is sometimes shown to be related to gender. The most recent study by Sorrentino et al. (2019) including almost 5,000 students from eight European countries (Italy, France, Poland, Spain, Hungary, Cyprus, Greece, Bulgaria) showed that boys were more involved in cyberbullying behaviour as a perpetrator than girls in all types of cyberbullying behaviour (e.g. flaming, denigration, impersonation, outing, exclusion). In the case of cyber victimization, boys and girls were equally victimized but in the context of types of cyberbullying, boys were more likely than girls to be victimized by exclusion (Sorrentino et al., 2019). Previous studies (Hinduja & Patchin, 2008; Slonje & Smith, 2008) have also shown that gender differences may depend on the specific method of communication (e.g. emails, text-message, pictures). For instance, it was found that girls were targeted via e-mail more frequently than boys (Hinduja & Patchin, 2008). Furthermore, scholars have also found that there are gender

related differences in terms of suggested coping strategies (Frisén et al., 2014). More precisely, Swedish scholars investigated what coping strategies pupils suggest they would use if they were cyberbullied**.** They found that girls were more likely than boys to suggest that they would tell someone if they were cyberbullied (parents and teachers, as well as friends); at the same time, boys were more likely to suggest that they would retaliate in an offline-context if they were cyberbullied (Frisén et al., 2014).

The reasons why boys and girls experience and perceive cyberbullying behaviour differently have been explained on the basis of theories associated with traditional bullying (Hinduja & Patchin, 2008; Slonje & Smith, 2008; Willard, 2007). The studies of traditional bullying have shown that boys are more involved in forms of direct bullying (e.g. physical bullying) and girls more with forms of indirect bullying (e.g. rumour spreading) (Nansel et al., 2001). Therefore, it may depend on how the cyberbullying is theoretically conceptualized (Barlett & Coyne, 2014). If cyberbullying is considered to be a more specific form of bullying and aggressive behaviour then we would expect boys to cyberbully more than females but if it is considered as a special form of indirect or relational aggression we may assume females would cyberbully more than males or the gender balance to be equal (Barlett & Coyne, 2014). On the contrary, it may also be excepted that, since boys have better ICT skills, they cyberbully more frequently than girls (Barlett & Coyne, 2014). Furthermore, the impact of society, media, socialisation and gender roles has been proposed as a background to explain gender differences in cyberbullying behaviour (Beckman, Hagquist, & Hellström, 2013; Frisén et al., 2014; Shariff, 2008).

The inconsistent findings in the context of gender across studies may depend on the measurement factors. First, different age ranges across genders targeted in studies may affect the study results. Second, systematic reviews and meta-analyses of cyberbullying have shown that the terms and definitions of cyberbullying behaviour varies across instruments and this may have an effect on the results (Berne et al., 2013; Kowalski et al., 2008; Tokunaga, 2010). Therefore, we may assume that the different terms used in instruments and how the cyberbullying construct was defined may influence the measurement results in the context of gender as well. Third, the overall construction of items (e.g. item wording, single-item measures, multiple-item measures) are factors that can affect the prevalence rates (Kowalski et al., 2008). Last, little attention has been paid to whether the phenomenon of cyberbullying is perceived similarly based on gender differences. This is an important issue to target because it is possible that boys and girls do not perceive the definition of cyberbullying similarly.

2.4 The Role of Age in Cyberbullying

The developmental aspect of cyberbullying behaviour has been explained using general developmental theories (Barlett & Coyne, 2014) and patterns of overall ICT use (Kowalski et al., 2019; Lenhart, 2015). Since verbal skills in late childhood and early adolescence have evolved and the balance has shifted from physical aggression to verbal aggression, it is assumed that this is also the period when relational and indirect forms of aggression emerge, including cyberbullying (Barlett & Coyne, 2014). Consequently, as a cyberbully must have the necessary technological skills and knowledge to hurt others, the phenomenon often emerges around late childhood to early adolescence (Barlett & Coyne, 2014). In addition to the technological know-how, the new technologies are providing additional opportunities for socialization and this may also be a reason why the prevalence of cyberbullying behaviour is high during adolescence (Valkenburg & Peter, 2011). For instance, the study by Williams and Guerra (2007) among Colorado youth from grades 5, 8 and 11 showed that students in grade 5 reported the lowest rate of victimization (4.5%), the highest point was among those in grade 8 (12.9%) and the rate dropped in grade 11 (9.9%). The authors of a critical review and metanalysis of cyberbullying have concluded that cyberbullying peaks around late middle school (Kowalski et al., 2014; Tokunaga, 2010) and during that critical period students experience both cyberbullying and traditional bullying (Kowalski et al., 2014). In the context of traditional bulling, Kõiv (2006) has also concluded that basic school is the time when students of both sexes are most likely to be involved in bullying behaviour. Consequently, the majority of researchers have concentrated on middle school students in their research (Kowalski et al., 2019).

Exploring age as a significant predictor of cyberbullying victimisation is widespread in literature concentrated mainly on children and teens (Tokunaga, 2010). In general, the study results on this topic have shown incoherent findings (Tokunaga, 2010). Some studies have found no link between the two variables (Patchin & Hinduja, 2006; Perren & Gutzwiller-Helfenfinger, 2012; Smith et al., 2008), while in other studies, age has moderated the cyberbullying behaviour (Barlett & Coyne, 2014; Dehue, Bolman, & Völlink, 2008; Hinduja & Patchin, 2008; Slonje & Smith, 2008). The meta-analysis by Barlett and Coyne (2015) showed that age moderated gender differences in the context of cyberbullying behaviour resulting in girls being more likely to report cyberbullying during early to mid-adolescence compared to the opposite sex, and boys reporting higher levels of cyberbullying during later adolescence compared to girls. The mixed relationship between cyberbullying and age may result from the fact that in different studies, the investigated age range of the sample varies greatly as does the age range of the comparable age groups (Tokunaga, 2010). Another explanation may also lay in the fact that students of different ages use ICT tools for different purposes, and therefore experience cyberbullying behaviour to varying degrees (Kowalski et al., 2019). As with gender, the inconsistent findings

may be explained by measurement factors, such as differences in the operationalization of the construct or administration and wording of the measure items. For instance, based on the results of a meta-analysis, Kowalski et al. (2014) conclude that the inclusion of a bullying definition or the word "bully" in the instrument resulted in a smaller relationship between cyber victimization and age and cyberbullying and age. Lastly, little attention has been paid to whether the phenomenon of cyberbullying is perceived similarly based on development factors. This is an important issue since we may assume that the cyberbullying definitions presented in the instruments may be perceived differently based on the age of the participants.

Previous studies on traditional bullying have indicated that the concept of traditional bullying is understood differently depending on age (Monks & Smith, 2006; Smith et al., 2002) and this could also be the case in cyberbullying (Thomas et al., 2015). Earlier scholars have also found that there are age related differences in terms of the suggested coping strategies among victims when dealing with cyberbullying (Frisén et al., 2014) and how the cyberbullying is morally justified (Conway, Gomez-Garibello, Talwar, & Shariff, 2016; Leduc, Talwar, Conway, & Gomez-Garibello, 2018). For instance, in Canada, Conway et al. (2016) investigated how the type of aggression (cyberbullying or traditional bullying) and participant role (bystander or perpetrator) influence children and adolescent self-attribution of moral emotions and judgments. Participants were asked to take the perspective of the perpetrator and bystander. In the case of the bystander role, children as younger participants self-attributed more morally disengaged emotions (pride) and less morally responsible emotions (guilt and shame) compared to adolescents. Age differences were not identified in the case of the perpetrator role (Conway et al., 2016). The age factor is an important issue to target because knowing how the phenomenon is perceived from different perspectives and the age at which children and teens are most exposed helps plan and implement prevention and intervention strategies (Kowalski et al., 2014; Thomas et al., 2015; Tokunaga, 2010) and to ensure that the items used in cyberbullying instrument scales are age appropriate (Thomas et al., 2015).

In conclusion, different studies may yield different results for the overall cyberbullying and victimization rates, as well as on gender and age differences. It is crucial that these differences are due to cultural specificities or to the design of the study in general, but not to the fact that the construct of cyberbullying is poorly defined and does not consider the perception of the participants. This dissertation tries to contribute to this issue.

3. RESEARCH METHODOLOGY

The following chapter provides an overview of the methodology used in the study. First, an overview of the research questions and the methodology used to answer them are presented. Then, the samples are described and the data collection instruments, procedures and data analysis methods introduced. Lastly, the quality of the research is discussed. To accomplish the aim and to find answers to the research questions, a mixed-method approach was used, consisting of data collection using focus group interviews and a questionnaire. Each of the published articles (I–III) pose more specific aims and research questions. Table 3 presents an overview of the research questions formulated for this dissertation and how these were addressed with the data collection and analysis methods and corresponding published articles.

Considering the overall aim and research questions, the study was designed as mixed-methods research (MMS). "*MMS is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration*" (Johnson, Onwuegbuzie, & Turner, 2007, p. 123). More precisely, a quantitative dominant sequential mixed methods research (Johnson et al., 2007) was used in the current cross-sectional study. This type of research is guided by a post-positivist view of the research process, acknowledging the benefits and positive contributions that qualitative approaches can add to quantitative studies (Johnson et al., 2007). The author of this dissertation believes that combining qualitative and quantitative approaches offers the best opportunity to answer to the proposed research questions. There are several benefits of using mixed methods design; for instance, it has a broader scope than a single method design and may provide multi-layered information about the complex social phenomenon being studied (Giddings & Grant, 2006). The study consisted of two phases. As the preliminary and qualitative phase of the study, two focus groups interviews were conducted followed by the quantitative phase, which included data collection using a questionnaire. It was assumed that the qualitative study would help to operationalize theory driven topics connected to the phenomenon of cyberbullying. Fetters, Curry and Creswell (2013) emphasize that it is important to integrate qualitative and quantitative methods at multiple levels of the study. At the design-level of the study, the results of the focus group interviews were treated as inputs for the questionnaires. At the interpretation-level, the results of qualitative phase (data gathered via focus groups) were used to interpret the results of the quantitative phase (data gathered via questionnaires). Figure 2 presents an overview of how the qualitative and quantitative strands of the study were integrated and which articles utilise and present the data from the two research phases.

Table 3. Overview of the research questions, data collection and analysis methods, and published articles

Research questions	Data collection methods	Data analysis methods	Title of published article
1. What is the best term to label scenarios describing different situations or behaviours that could be considered cyberbullying? 2. Which criteria of cyberbullying behaviour are relevant for Estonian students in labelling cyberbullying behaviour and evaluating the severity of the scenarios? 3. What types of cyberbullying behaviour are relevant for Estonian students in labelling cyberbullying behaviour and evaluating the severity of the scenarios?	Focus groups and questionnaire	Focus groups: A systematic approach for analysing focus groups data (Knodel, 1993; Krueger & Casey, 2009; Morgan 1988, 1997) Questionnaire: Multidimensional Scaling (MDS), Kruskal-Wallis Test, Mann-Whitney U test	Naruskov, K., Luik, P., Nocentini, A., & Menesini, E. (2012). Estonian students' perception and definition of cyberbullying. *TRAMES: A Journal of the Humanities & Social Sciences, 16*(4), 323−343. doi: http://dx.doi.org/10.3176/tr.2012.4.02
4. What are the differences between Estonian boys' and girls' perception of the cyberbullying phenomenon in the context of five cyberbullying criteria and four cyberbullying types?	Questionnaire	Chi-square test, Independent Samples T-Test, Mann-Whitney U test	Naruskov, K., & Luik, P. (2015). Küberkiusamise fenomeni tajumine Eesti õpilaste seas: sooline võrdlus kiusamise kriteeriumite ja liikide alusel. *Eesti Haridusteaduste Ajakiri, nr 3*(2), 186–215. doi: http://dx.doi.org/10.12697/eha.2015.3.2.07
5. What differences exist in the perception of the cyberbullying phenomenon between Estonian students aged 12–13 and 15–16 years of age in the context of five cyberbullying criteria and four cyberbullying types?	Questionnaire	Chi-square test, Paired Samples T-Test, Independent Samples T-Test, Mann-Whitney U test, Wilcoxon's test	Luik, P. & Naruskov, K. (2018). *Student's Perceptions of Cyberbullying in the Context of Cyberbullying Criteria and Types: The Role of Age*. Paper presented at the 7th International conference on Learning Technology for Education Challenges, Žilina, Slovakia. Springer, Cham. doi:10.1007/978-3-319-95522-3_3

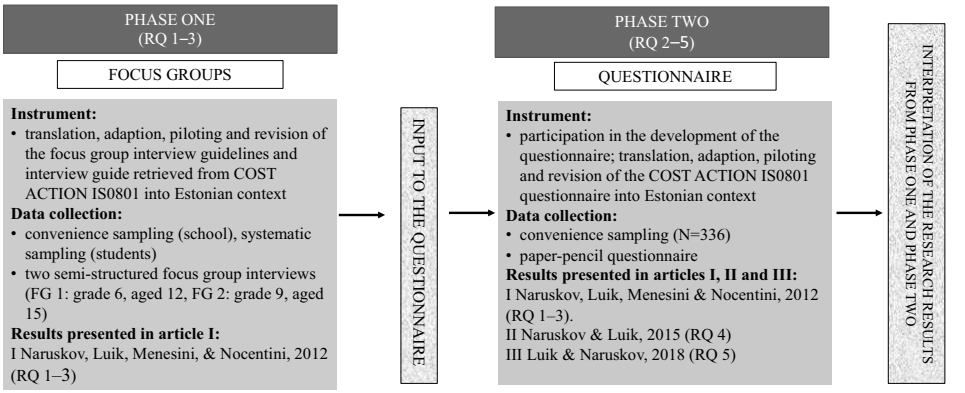

Figure 2. Sequential mixed methods research design used in the dissertation

Note: RQ – research question, FG – focus group

This dissertation uses the methodology from the project "COST ACTION IS0801 Cyberbullying: coping with negative and enhancing positive uses of new technologies, in relationships in educational settings." The project took place in 2008–2012. Bullying and cyberbullying researchers from 28 European countries and two NON-COST countries (Ukraine and Australia) participated in the COST action. There were six working groups focusing on different aspects of cyberbullying. The author of this dissertation and her supervisors participated in Working Group 1. One of the supervisors, Ersilia Menesini, was the coordinator of this working group. This working group aimed to share expertise in the knowledge base and measurement techniques across researchers. Regular meetings, conferences, and workshops took place during the project. Estonia, represented by the author of this thesis and her supervisor Piret Luik, entered the COST project in 2010, when the focus group guidelines and interview guide were already developed in Working Group 1. As we entered the project, the questionnaire was in the process of being developed, and therefore we had a chance to discuss the wording of the items and questionnaire administration procedure and make adjustments to the questionnaire that were coordinated with the project requirements (described below in this chapter).

3.1 Participants

3.1.1 Participants in the focus groups

The focus groups were formed on the basis of the guidelines developed by the European project COST ACTION IS0801 ''Cyberbullying: Coping with negative and enhancing positive uses of new technologies, in relationships in educational settings'' Working Group 1. Following these guidelines, two focus groups were formed of 20 students attending one secondary school located in south Estonia. The school was selected using the convenience sampling method. This school

was chosen because the social pedagogue working there was a person familiar to the author of this dissertation and her supervisor Piret Luik. The two moderators (the author of this dissertation and her supervisor) and the students who participated in the focus group interviews were not familiar with each other. In accordance with the COST guidelines, focus group 1 participants included five boys and five girls from grade 6 and aged 12. The gender division was the same in focus group 2, but the students were from grade 9 and aged 15. When interviewing young people, the age gap between participants should not be more than two years because in a developmental sense this gap may strongly affect student interests, experience and socialization (Krueger & Casey, 2009). Students within the focus groups were selected using a systematic sampling technique. Every third boy and every third girl in the class list was chosen to participate in the focus group interview. Although, focus groups are composed of homogeneous groups of people, systematic sampling can be used after the researchers have already assembled a pool of potential participants in order to minimize selection bias (Krueger & Casey, 2009). The starting point of the selection in the class list was the first family name that started with the letter K. If the student was absent from school or did not want to participate in the study, the next student in the list was selected.

3.1.2 Participants in the questionnaire

The selection of the sample in the second phase of the study was also in line with the requirements of COST ACTION IS0801. Based on the guidelines, the goal was to involve in the sample 12 and 15-year-old students equally of both sexes. In Estonia 12-year-old students study mainly in grade 5 and grade 6, and 15-year-olds mainly in grade 8 and grade 9. Since in some cases it was difficult to make such a distinction in the classroom situation, the teachers were also allowed to include students who studied in the same class but did not meet the conditions so strictly. This explains the age variability of the sample and why the number of questionnaires received was higher than originally planned. Therefore, data for the second (quantitative) phase of the study were gathered from 336 Estonian adolescents (48% female) aged between 11 and 17 (M=14.00, DS=1.46). Students were recruited from three schools in big towns, three in small towns, and six country schools using the convenience sampling method. Six of the schools were secondary schools (from first to twelfth grades), the other six were basic schools (from first to ninth grades). The number of students in these school types was accordingly 218 and 118. See Table 4 for descriptive data.

Table 4. Characteristics of the students who participated in the second phase of the study (based on Naruskov & Luik, 2015, p. 194)

	Boys (N=173; 52%)	**Girls** (N=163; 48%)	**Total** (N=336; 100%)
Mean age	14.06 (SD=1.45)	14.02 (SD=1.49)	14.04 (SD=1.46)
Class	Grade 5: 26% (N=46) Grade 6: 21% (N=36) Grade 7: 4% (N=7) Grade 8: 36% (N=62) Grade 9: 13% (N=22)	Grade 5: 30% (N=49) Grade 6: 20% (N=32) Grade 7: 2% (N=3) Grade 8: 36% (N=59) Grade 9: 12% (N=20)	Grade 5: 26% (N=95) Grade 6: 21% (N=68) Grade 7: 4% (N=10) Grade 8: 36% (N=121) Grade 9: 13% (N=42)

For age comparisons, the data set was harmonized according to age (Table 5). Students who were 14 years old or older than 16 were removed from the sample resulting in two distinguishable age groups: 12–13 years and 15–16 years. The final sample in Article III included 325 students.

Table 5. Characteristics of the students in Article III (Luik & Naruskov, 2018)

	Age group 12–13		**Age group 15–16**		**Total**	
	N	%	N	%	N	%
Boys	82	51	86	52	**168**	52
Girls	78	49	79	48	**157**	48
Mean age	12.66 (SD=.48)		15.41 (SD=.49)		**14.05**	
Total	**160**		**165**		**325**	

3.2 Data collection instruments

3.2.1 Focus groups

Morgan (1996, p. 130) defines focus groups as a "*research technique that collects data through group interaction on a topic determined by the researcher*." There are many benefits of using focus group interviews as a method (Morgan, 1996). For example, the specific nature of the interaction between the participants in focus groups creates an environment of enquiry and situations where they must explain themselves to each other (Morgan, 1996). This kind of interaction offers researchers rich data because it is possible to observe the level of agreement and disagreement among the participants (Morgan, 1996). There are several ways to combine surveys and focus group interviews, and one of the most common is to use focus groups to develop the content of the questionnaires to provide data on how the respondents themselves talk about the topic of the survey. This process helps to reduce the discrepancy between how the researchers and respondents

perceive aspects of the topic (Morgan, 1996). This was precisely the intention in current dissertation. Furthermore, the results of qualitative phase were used to interpret the results of quantitative phase.

In order to discover how Estonian adolescents perceive the five cyberbullying criteria and four types of cyberbullying behavior, the focus group guidelines and interview guide developed during the European COST ACTION IS0801 project were used. The focus group interview guide, consisting of questions and scenarios, was translated from English into Estonian by the author of the thesis and her supervisor. The results of the translations were synthesized by comparing the translations, and discussing and resolving any discrepancies. In order to check gross inconsistencies and conceptual errors in the translation, a translator who was not aware of the concept translated the questions and scenarios back into the original language. According to Beaton et al. (2000), back translation is one method of checking translations to ensure that items from translated versions and original versions reflect the same content. Following Krueger and Casey's (2009) guidelines, the author of this thesis tested the questioning route with Estonian students before the actual focus interviews with people who matched the focus group screen to be sure that the questions are easy to express verbally and that the questions are clearly understood by the students. The students who participated in the piloting phase were not the same students that participated in the main interviews. During the pilot interview the author of the thesis understood that it is difficult to conduct the interview simply by reading the scenarios out loud, since there were ten scenarios and their differences were difficult to understand because they involved minor details. As a result of the piloting phase conducted in Estonia, the author of this thesis decided to print all ten scenarios separately using a large font size onto A4 paper. This helped the students understand the differences between the scenarios and simplified the discussion.

The interview guide consisted of ten scenarios; the first six scenarios explored the five cyberbullying criteria. The first scenario was a control scenario where no criteria were present. The next five scenarios combined the presence and absence of five cyberbullying criteria (imbalance of power, repetition, intentionality, public/private, anonymity) (see Figure 2). Both focus group interviews followed the questioning route described by Krueger and Casey (2009) as "*the series of questions used in a focused interview*" (p. 35). The moderators followed an interview guide which considered the following sections suggested by Krueger (1994), Krueger and Casey (2009) and Morgan (1988):

1. *Opening Questions*
   Participant presentations, questions about the lessons that preceded the interview to get everyone talk in the discussion.
2. *Introductory Questions*
   Questions about participants' online activities to introduce the topic of the discussion and to get participants to think about their connection with the topic.

3. *Key Questions*

   Key questions are the core elements of the focus group interviews. In the case of the first six scenarios representing the five criteria of cyberbullying students were asked to discuss:

   (1) *What would you call the following behaviours?*
   (2) *How serious do you think these behaviors are*?
   (3) *What would you do in the specific situations?*
   (4) *For you, does it make any difference whether these behaviours are conducted privately (between two people) or whether more and other people see them?*

   The second part of the interview concerned the type of cyberbullying behaviour, and therefore the last four scenarios reflected the type of cyberbullying behaviour (written-verbal, visual, impersonation, and exclusion). In the case of these scenarios, students were asked to discuss:

   (5) *Are there differences between these behaviours? In your opinion, are the behaviours equally serious or are some more serious than others? Which one do you find the most serious?*
   (6) *Which term would you use to summarise all the presented behaviours? (Or maybe they cannot be summarised under one term because they differ too much?).*

4. *Concluding Questions*

   Closure of the discussion: give a summary of the interview, leave students to discuss other topics if they want to, thank the students for their help and participation.

3.2.2 Questionnaire

A set of 32 scenarios were created through which the five criteria considered as the most relevant in cyberbullying literature were manipulated (See Appendix A for the presence and absence of the criteria in all 32 scenarios). This process was repeated with all four types of cyberbullying behaviour, and consequently, a total of 128 scenarios were developed. Figure 3 visualizes the process of scenario development and how the five criteria and types of behaviour were reflected in the questionnaire.

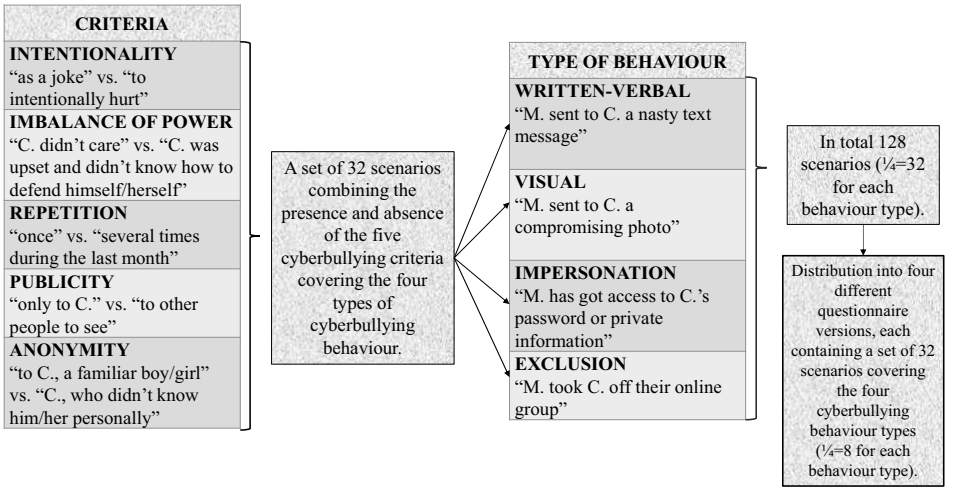

Figure 3. The process of creating the scenarios and the instrument

The 128 scenarios were translated from English into Estonian by the author of the thesis and her supervisor Piret Luik. During this process the resulting translations were synthesized by comparing the translations, discussing and resolving discrepancies between the two translators. In order to ensure that items from the translated versions and original versions reflect the same content, a translator who was not aware of the concept translated the scenarios back into the original language, as suggested by Beaton (2000). Then the author of the doctoral thesis piloted the questionnaires with students similar (age, gender) to those participating in the main study. The students who participated in the pilot study were not the same students that participated in the piloting phase of the focus group interviews and they were not included in the final sample.

The pilot phase of the questionnaire revealed that Estonian students found it difficult to complete the questionnaire because there were several scenarios and their differences were difficult to understand since the scenarios were long and their difference were only visible in the minor details. As can be seen from Appendix A, the first eight scenarios are characterized by the absence of the criteria of anonymity and publicity. The other three sets of scenarios (9–16, 17–24 and 25–32) are also characterized by the dynamics of the absence or presence of criteria related to public/private and anonymity. So, on the basis of these patterns the "leading case" approach was implemented in the Estonian setting to facilitate student understanding of the different scenarios. In the "leading cases" one of the four types of cyberbullying behaviour and the absence and/or presence of two cyber-specific criteria – publicity and anonymity – were reflected followed by the scenarios where the absence and presence of the other three criteria (imbalance of power, intentionality, and repetition) were combined (see Figure 4).

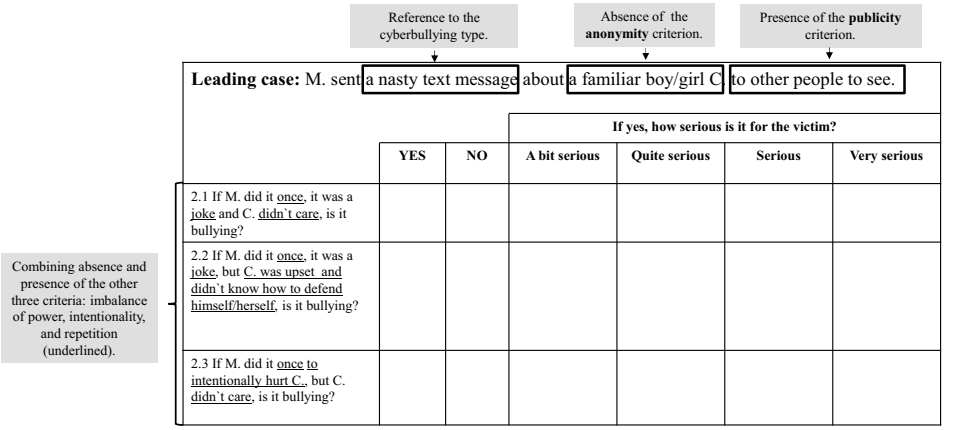

Figure 4. A segment from the questionnaire explaining the "leading case" approach used in the questionnaire

A randomised version of the questionnaire was administered to Estonian students. As the number of scenarios was too large to be evaluated by one student, they were divided into four versions of the questionnaire and each student evaluated 32 scenarios (eight scenarios for each of the four types of cyberbullying behaviour) (see Table 6).

Table 6. Four different versions of the questionnaires distributed to the students

	Number of scenarios			
	1–8	**9–16**	**17–24**	**25–32**
Version A	Written-verbal	Exclusion	Impersonation	Visual
Version B	Exclusion	Visual	Written-verbal	Impersonation
Version C	Visual	Impersonation	Exclusion	Written-verbal
Version D	Impersonation	Written-verbal	Visual	Exclusion

The goal was to distribute each version to 20 male and 20 female students from each of the age groups, thus each version would be evaluated by 80 students. Table 7 shows the planned administration of the questionnaires on the basis of versions, gender and age groups, the actual numbers of collected questionnaires are given in brackets.

Table 7. Administering different versions of the questionnaire across age groups and genders

	Version A	Version B	Version C	Version D	Total
12-year-old boys	20 (21)	20 (20)	20 (21)	20 (20)	80 (82)
12-year-old girls	20 (20)	20 (20)	20 (21)	20 (20)	80 (81)
15-year-old boys	20 (24)	20 (28)	20 (19)	20 (20)	80 (91)
15-year-old girls	20 (18)	20 (24)	20 (19)	20 (21)	80 (82)
Total	80 (81)	80 (92)	80 (80)	80 (81)	360 (336)

At the beginning of the questionnaire, students were provided with a brief overview of the research topic followed by the structure of the questionnaire and instructions for completing it. Furthermore, the two terms that needed more precise explanations for students in the focus group interviews were explained: *private information* and *buddy list*. Next, the students were asked to respond to questions about their birth year, grade, years of study in school, and gender. These questions were followed by the 32 scenarios. Students were asked to evaluate each scenario based on whether they thought the scenario was bullying (term suggested by students in focus group interviews) or not, and if the answer was yes, then they were asked to evaluate the seriousness of the behaviour based on 4-point Likert-type items (a bit serious, quite serious, serious, very serious).

3.3 Data collection procedure

3.3.1 Focus groups

The focus group interviews were conducted in autumn 2010. Two focus groups of approximately 45 minutes were carried out with both age groups. The focus group interviews were held during the school day in a classroom. Following the guidelines of Krueger and Casey (2009), two moderators, the author of this thesis and her supervisor Piret Luik, conducted both focus group interviews. The author of the doctoral thesis directed the session using the same interview guides for both age groups in accordance with the interview guidelines of Krueger (1994) and Morgan (1988). The author of this thesis considered herself a suitable person to conduct the interviews because she worked as a teacher of students of the same age in another school. Therefore, she had experience in communicating with students at this age and she also had knowledge of the subject being studied. In addition, the pilot interview that she conducted gave her the courage to be the moderator of the main interviews as well. Piret Luik was the assistant moderator who operated the audio recording, dealt with the environmental settings (e.g. arranging the tables and chairs), ensured that the printed scenarios were presented

to the students in the correct order during the interview, and also took notes to be discussed between and after the interviews.

At first, students were greeted by the two moderators and each group session began with a short introduction asking the participants to introduce themselves. Then the students were given an overview about the purpose and procedure of the interviews. To create a supportive environment and to encourage all the students to express their opinion, ground rules were set at the beginning of both interview sessions emphasizing confidentiality and respect of opinions. Then the questioning route was used consisting of opening, introductory, key, and concluding questions as suggested by Krueger and Casey (2009) and described in more detail in sub-chapter 3.2.1 of this thesis.

3.3.2 Questionnaire

The data collection using the questionnaires took place during the period between February and May 2011 in 12 Estonian basic and secondary schools. The questionnaire was administered as a paper-and-pencil instrument and was completed by students during school time in the classroom setting. The randomized versions of the questionnaires were sent to the schools with detailed information on how to administer, complete the questionnaire and provide help where necessary. Teachers were also asked to emphasize, in addition to the introductory part of the questionnaire, that the participation was voluntary and anonymous. The researchers had a contact person in each school to provide help and additional information. The questionnaire took 15–20 minutes to complete.

Since the purpose was to get predetermined and equal number of respondents across the four different versions of questionnaires, also considering the gender and age distribution of the respondents, as well the location of the school and school type, then the process of data collection was guided by these parameters to ensure that at the end of the data collection we have had the complete dataset covering all the four questionnaire types.

3.4 Data analysis

3.4.1 Focus groups

The data analysis was based on approaches that specifically focus on analysing the data gathered from the focus groups (Knodel, 1993; Krueger & Casey, 2009; Morgan, 1988; Morgan, 1997). According to Krueger and Casey (2009), the purpose of the study leads the data analysis process by helping the researcher know what to focus on when analysing the data. Krueger and Casey (2009) have pointed out different *analytical frameworks* for focus group analysis, which depend on the purpose of the research and help select the focus point for the analysis. Regarding the overall aim of the current dissertation and the choice of a quantitative dominant mixed methods research methodology, the analysis of the

focus group interviews was framed to obtain insights into how students perceive the key concepts of the cyberbullying phenomenon (the label, cyberbullying criteria and types of behaviour) in order to inform the study with the direct perspective of the students.

After the interviews, audio recordings of the focus group sessions were transcribed verbatim. The transcripts included 12 pages (line spacing of 1.5 and font size 12) in the case of Focus Group One and 10 pages in the case of Focus Group Two. The answers of boys and girls were differentiated as much as possible while transcribing the interviews.

As suggested by previous authors (Knodel, 1993; Krueger & Casey, 2009) the data analysis started with repeated reading of both interview transcripts (*data corpus*) to become familiar with the data and recall what was discussed during the interviews keeping the overall aim in mind. The next step was the coding phrase, which was done separately for both groups. The code is "/…/ *a word or short phase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language* /…/" (Saldaña, 2009, p. 3). As proposed by Knodel (1993) and Morgan (1988), the data analysis of the focus group interviews was largely directed by the interview guides based on which the interviews were conducted, and therefore student answers to each discussed scenario were coded separately in relation to the questions in the interview guide. In this study, the data was collected using the semi-structured interview guidelines, which means that in both focus groups the same scenarios were covered in the same order following the predetermined key questions, and therefore the main idea of the analysis and reporting the data was to address these topics as recommended by Morgan (1997). Following the suggestions from Morgan (1997), the *coding unit* was not strictly defined at the group level, nor at the individual level, but instead the analysis was aimed at finding a balance between these two "levels of analysis", which means that the researcher is aware of the interplay between these levels.

Different coding methods were used during this process: *In Vivo Code*s and *descriptive codes* (Table 8). For example, in the case of labelling cyberbullying behaviour, the students answers to key questions that concerned the label were coded across the data mainly using *In Vivo codes*. In Vivo codes are derived directly from the transcript in the participant's own language (Saldana, 2009). *Descriptive codes* summarize in a word or short phrase the basic topic of a passage of qualitative data (Saldana, 2009).

Table 8. Coding methods used during the data analysis process

CONTENT	CODE APPLIED	CODE TYPE
Presented scenario: "*Last month M sent a nasty text message to intentionally hurt familiar boy/girl C, and other people could see it. C didn't care.*"		
Boy 1: I would have cared now.[1] **Boy 2:** Maybe no one knows who C is and maybe that's why he (C) didn't care.[2] **Girl 1:** Has C spoken to M about why he's (M) doing it?[3] **Boy 3:** Maybe C should go to a social pedagogue to get things sorted out.[4] **Girl 2**: Do you have a social pedagogue at MSN?[5] **Boy 3:** No, but in school there is. **Girl 3:** Well, maybe the teacher doesn't know who M is?[6] **Boy 3:** But maybe she knows. **Moderator:** What would you call this behaviour? **Students:** hmm…bullying[7], insulting[8]…it is insulting, humiliation[9]…it's like yelling[10].	[1] perceived imbalance of power [2] reasoning the absence of imbalance of power [3] causes of behaviour [4] help seeking [5] technical considerations (medium) [6] help seeking	DE-SCRIPTIVE CODES
	[7] bullying [8] insulting [9] humiliation [10] yelling	IN VIVO CODES

After coding, the pattern searching process began, which means that codes were clustered together based on similarity and regularity as described by Saldaña (2009). As suggested by Krueger and Casey (2009), the categorisation phase was again guided by the purpose of the study. Examples of how the codes and categories were developed during the data analysis is shown in Table 9.

Table 9. Example of focus group analysis

CONTENT	CODE APPLIED	CATEGORY
Presented scenario: "*M has been sending a nasty text message intentionally to hurt familiar boy/girl C every week for a month. C was upset and didn't know how to defend himself/herself.*"		
Moderator: What would you call this behaviour?		
Boy: I think this is a very bad behaviour.[1]	[1] bad behaviour	
Moderator: What does this bad behaviour mean?	[2] bullies	LABEL-LING THE BEHAVIOUR IN NON-CYBER CONTEXT
Boy: I don't know, bullies ...[2]	[3] mental abuse	
Girl: It's like mental abuse.[3]		
Moderator: Okay. Why?		
Girl: That when he intentionally sends it, not for fun anymore, just to intentionally hurt someone, it is mental abuse then.[4]	[4] mental abuse	

After the coding and categorisation phase, overview grids were created in the Word document. Knodel (1993) uses "overview grids" to interpret the codes and categorisations and to systematically summarise what the focus group said in response to each question. These grids helped to form the analysis and depict the results. Separate grids were created for each scenario presented during the focus group interviews. The scenarios were included in the header of these tables. The grids were divided into separate rows according to the main themes discussed during the interviews. As a result, the first row concerned the term, second row reflected the seriousness, third row was for the student's reactions. Next, in accordance with Krueger and Casey (2009), summaries of the content of the discussion for each group concerning each topic were provided focusing on the meaning of the codes and categories developed at the previous stage of the analysis (Krueger & Casey, 2009). The summaries were written based on the analysis of both focus groups and, if necessary, the differences and similarities that seemed important to the researchers, were highlighted in the grids. In order to decide how much weight to give to the comments and themes emerging from the interviews, the frequency of something said and participants emotions were taken into consideration, as suggested by Krueger and Casey (2009). These summaries were provided with quotes from the interview and some of them became illustrative quotations in the report.

After constructing the overview grids and writing the summaries, the content of the grids was examined based on the research questions to find patterns existing between the analytical subdivisions used in forming the overview grid

and to see what pattern cut across the scenarios as previously suggested by the authors (Knodel, 1993; Krueger & Casey, 2009). This process also required a return to the original transcript to develop appropriate interpretations of the data as described by Knodel (1993).

3.4.2 Questionnaire

The data were analysed using the statistical software SPSS 17.0 and 21.0. Multidimensional scaling (MDS) was used to analyse the underlying structure of the relationship between the scenarios. "*Multidimensional scaling is a method that represents measurements of similarity (or dissimilarity) among pairs of objects as distance between points in low-dimensional multidimensional space*" (Borg & Groenen, 1997, p. 3). MDS provides a visual representation of the dissimilarities (or similarities) among objects so that the "*points that are closer together on the spatial map represent similar objects while those that are further apart represent dissimilar ones*" (Jaworska & Chupetlovska-Anastasova, 2009, p. 1). The main purpose of the MDS analysis is to obtain the best fit with the smallest number of possible dimensions because when the dimensionality is increased the readability and interpretation of the MDS map suffers (Jaworska & Chupetlovska-Anastasova, 2009).

As a preliminary step in the data analysis, the data obtained from the questionnaires were inserted into SPSS in person-by-variables format: each column represented the variables and the rows represented the respondents. The MDS procedure requires a specific type of data set, more precisely, a proximity matrix which in general quantifies how "close" two objects are (Borg & Groenen, 1997; Giguère, 2006; Groenen & Velden, 2004; Jaworska & Chupetlovska-Anastasova, 2009). There are two main methods that are used to obtain the data for an MDS analysis: *direct collection of proximities* and *derived proximities* (Borg & Groenen, 1997; Groenen & Velden, 2004). Since the data collected in this study did not contained direct proximities between variables, derived proximities were obtained from the original data. Therefore, to assess similarity or difference between any two scenarios by comparing the percentages profile and to permit an analysis of the structure of the scenarios, the percentage of participants who defined each scenario as "cyberbullying" was calculated. This process was repeated separately for the four types of cyberbullying behaviour in order to consider differences between types of behaviour in the structure analysis. Euclidean distance was used to create four distance matrices between the scenarios, one for each type of behaviour. According to Leydesdorff and Vaughan (2006), Euclidean distances are a default measure of dissimilarity and a Euclidean distance matrix can be treated as a dissimilarity matrix.

Since the dissimilarity algorithm was occupied and the data collected in this study was on the ordinal level, the analysis was accomplished using the PROXSCAL procedure with ordinal MDS (non-metric MDS) as suggested by previous authors (Giguère, 2006; Leydesdorff & Vaughan, 2006; Tsogo, Masson,

& Bardot, 2000). Kruskal's (1964) recommendations were followed to determine the number of dimensions that provide the best fit with the data. Kruskal's Stress value (STRESS-1) is the most common method to estimate the validity of the obtained non-metric scaling solution (Jaworska & Chupetlovska-Anastasova, 2009; Tsogo et al., 2000). Therefore, the Normalized Stress value was used in order to identify the best configuration or number of dimensions; solutions were sought in one to four dimensions. According to Kruskal (1964), the Stress value ranges from zero and one, the lower the Stress value, the better the scaling solution represents the input data (a badness-of-fit measure). The following benchmark is suggested to evaluate the solutions: .20=poor; .10=fair; .05=good; .025=excellent; .00=perfect (Borg & Groenen, 1997; Jaworska & Chupetlovska-Anastasova, 2009; Kruskal, 1964).

A Generalized Euclidean Model was used evaluate the consistency of the group configuration across the four types of behaviour. This was achieved by examining the 'dimension weights' calculated for the four proximity matrices. These weights range from 0 to 1. The greater the magnitude of the given dimension weight, the greater the relevance of the associated attribute for conceptualising that particular dimension. In general, the starting point for these models is that each participant has his or her own configuration in relation to the group configuration (Ding, 2013).

If the MDS reveals that the two-dimensional model is the best solution, then four quadrants are generated on the grid (See Figure 7). Therefore, it was possible to compare the students' severity assessments using the four quadrants. For this purpose, the Kruskal-Wallis test and Mann-Whitney U tests were applied.

Given the categorical nature of the question "Is it bullying?" (yes/no) the Chi-Square test was chosen to compare student evaluations separately for each scenario (Naruskov et al., 2012). For the same reasons, the Chi-Square test was used to compare the boys' and girls' evaluations separately across the 32 scenarios (Naruskov & Luik, 2015). Since the severity evaluations were on an ordinal scale, the Mann-Whitney T-test was used to compare the evaluations by the boys and girls across the 32 scenarios (Naruskov & Luik, 2015).

To make gender and age comparisons, the data were aggregated to make it more manageable for comparisons across the criteria and types of cyberbullying behaviour (see Figure 5). In the questionnaires, the scenarios were composed in such a way that in half of the cases (16) the criterion was present and in half of the cases it was not (16) (see Appendix). This was valid for all five cyberbullying criteria. The percentage of "Yes, it is bullying" was calculated on the basis of the existence of the criteria. For example, when the student perceived all the scenarios with the presence of the repetition criteria as bullying then the aggregated percentage was 100. This process was repeated separately for all five cyberbullying criteria. Since the student's severity evaluations were measured using Likert-type items, the medians were calculated as the aggregate separately for all five cyberbullying criteria (see Figure 5). The data analysis techniques in the case of aggregated data across gender (Naruskov & Luik, 2015) and age (Luik & Naruskov, 2018) are presented in Figure 5.

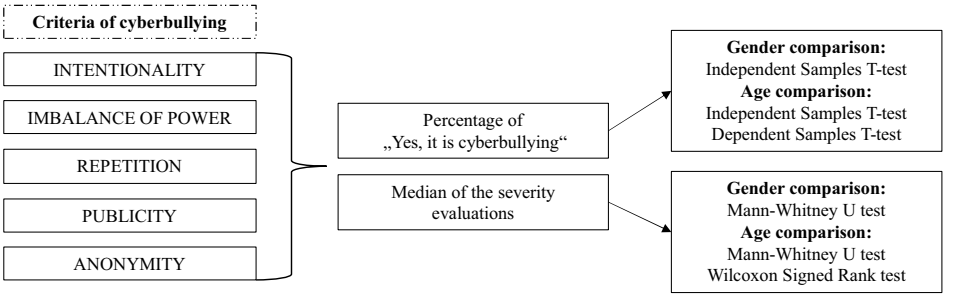

Figure 5. Data aggregation and analysis methods across the criteria of cyberbullying behaviour (Naruskov & Luik, 2015; Luik & Naruskov, 2018)

Similarly, the percentage of "Yes, it is bullying" was calculated separately across the four types of cyberbullying behaviour (see Figure 6). Since all questionnaire versions contained 32 scenarios, in which all four types of cyberbullying were equally reflected (Table 5), then the aggregated percentage was 100 when students evaluated all eight scenarios reflecting one type of cyberbullying behaviour as bullying. Similarly, the severity estimates which were measured using Likert-type items were also calculated as medians in the context of cyberbullying types. The data analysis techniques in the case of the aggregated data and across age and gender are presented in Figure 6.

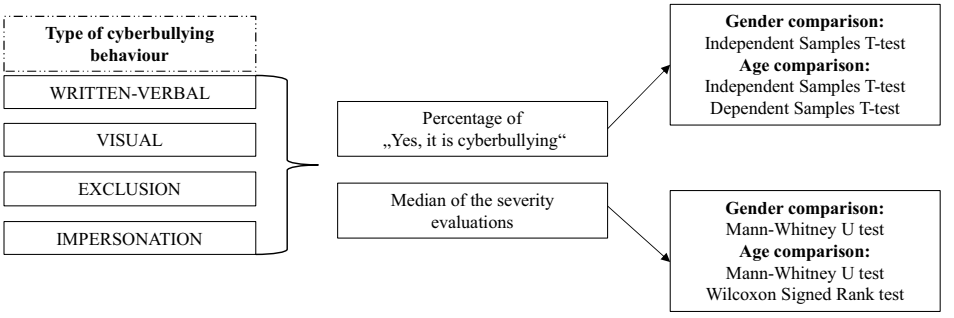

Figure 6. Data aggregation and analysis methods across the types of cyberbullying behaviour (Naruskov & Luik, 2015; Luik & Naruskov, 2018)

3.5 Ethical considerations

Several steps suggested by British Educational Research Association (2011) were taken during the qualitative and quantitative phase of the study to ensure that the research was conducted in accordance with ethical principles. After the school gave permission to participate in the focus group interviews, the parents of the classes from which the participants were selected were informed that the interviews would be conducted among the students and that they have right to forbid the child from participating in the study. Our primary contact in the school was

the social pedagogue. After the selection of the participants, we asked the social pedagogue to make sure that the groups do not include students that to her knowledge had previously had any type of conflict. At the beginning of the interviews, the purpose of the study was explained to the participant and it was also emphasized to the students that participation was voluntary, interviews were anonymous, and that neither the name of the student nor the school were used anywhere. Both focus groups were audio recorded with permission gained from the student pre-interview. The use of two moderators made it possible to better monitor the dynamics of the groups and the well-being of the students involved. After the interviews, the social pedagogue was informed that if any questions or problems arise after the interviews, they could be addressed to the moderators if necessary.

After the schools gave permission to participate in the study the author of this dissertation or her supervisor contacted with person who administered the questionnaire in each school, who in most cases was a teachers. The participants were informed by the teachers of the purpose of the study and that participation is voluntary, anonymous, and the data obtained in the questionnaire are only used for research purposes. It was also emphasized that there were no right or wrong answers in the questionnaire. Participants were also provided with the researchers contact information if they had questions or concerns with the research topic or the questionnaire in general. We offered an opportunity for teachers or students in the schools to participate in cyberbullying training courses and two schools used this. The training courses took place after the study was carried out in the schools.

3.6 The Quality of the Research

The quality of the qualitative study strand is assessed on the basis of the *trustworthiness* and *credibility* of the qualitative findings (Plano Clark & Ivankova, 2016). Trustworthiness is an umbrella term for quality in qualitative research, and it is achieved by establishing credibility, transferability, dependability and confirmability (Guba & Lincoln, 1994; Plano Clark & Ivankova, 2016).

The overall mixed methods approach used in this dissertation provided the opportunity to study the phenomenon of cyberbullying from two different perspectives using two dissimilar methods: focus group interviews and questionnaire. Triangulation is a powerful way of ensuring reliability and demonstrating concurrent validity because it enables the researcher to study the richness and complexity of human behaviour from more than one standpoint and thus reduces the researcher‘s bias and increases the researcher’s confidence when the methods contrast each other when investigating the phenomenon (Cohen, Manion, & Morrison, 2018).

3.6.1 Qualitative phase

When using the focus group interview methodology, it is important to ensure that the results are trustworthy in terms of the quality of the research (Krueger & Casey, 2009). Several strategies were implemented to foster the quality of the qualitative phase of the study at the research design stage. First, the focus group guidelines and interview guide were developed during the COST ACTION IS0801 project by Working Group 1. This is a team consisting of experts in the field of bullying and cyberbullying research. According to Krueger (1993), collegial advice is one way to improve the quality of a focus group study because a team-based approach to the design and procedure improves quality since colleagues can offer valuable formative advice on the critical features of the focus group study recruitment issues and question development. Therefore, creating the interview questions in collaboration may increase the validity of the questions (Guest, MacQueen, & Namey, 2012). Second, the process of developing the interview guide was based on the systematic approach provided by Krueger (1994) and Morgan (1988), which contributes to the quality (credibility) of the study (Guest et al., 2012; Krueger & Casey, 2009). Third, the translation and adaption process of the interview guide aimed to ensure the credibility of the study. Finally, the questioning route (focus group interview questions and scenarios) was piloted in Estonia to facilitate the validity by confirming that the questions made sense to the participants (Guest et al., 2012; Krueger & Casey, 2009).

During the data collection stage, the structured interview guidelines, developed during the COST ACTION IS0801 project by Working Group 1, functioned as researcher (moderator) training and helped understand the purpose behind the questions and the probing techniques, thus improving the relevance of the data (Guest et al., 2012). Moderators influence the quality of the research, and one strategy that fosters the quality of the focus groups is the guidance and training of novice moderators (Krueger, 1993). The interview guide (questions and scenarios) that led the process of both focus group interviews helped to minimize inconsistency and helped facilitate the dependability of the data collection stage (Krueger & Casey, 2009). The interview guide also included certain types of questions suggested by Krueger and Casey (2009) that helped to seek verification from the participants of the key points of the study and thus supported the credibility of the study. If the researcher wants to know what is important from the participant's point of view, they should be asked directly during the data collection stage of the study and not leaving this to post hoc speculation on the part of the analyst (Krueger & Casey, 2009; Morgan, 1997).

During the data analysis and reporting stage, the accuracy of the data analysis was enhanced by the fact that the data analyst (author of this dissertation) was involved with the actual data collection as a directing moderator; furthermore, the author of this thesis also transcribed the interviews. All of this helped to reduce the distance between the analysists and the participants (Knodel, 1993). The use of an assistant moderator, who also read through all the transcripts and collaborated on the analysis reduced the chance of making unwarranted emphasis or

invalid conclusions (Knodel, 1993). According to Krueger and Casey (2009, p. 89), an assistant moderator "*increases both total accumulation of information and the validity of the analysis.*" When several focus group interviews have been conducted it is possible to assess the dependability of the data by comparing statements and the extent of consensus within and between the sessions (Knodel, 1993). The construction of the overview grids during the analysis stage of the study facilitated this process in the current dissertation (Knodel, 1993). Verbatim quotes were used in the presentation of the findings to increase the conformability of the results by directly connecting the researcher's interpretations with what the participant said during the interviews (Guest et al., 2012).

3.6.2 Quantitative phase

The validity of the content of the questionnaire was confirmed by a panel of European experts from the field of psychology with a special interests in aggression, bullying, and cyberbullying behaviour from the COST ACTION IS0801 project. In terms of content validity, it is important to ensure that the questionnaire covers aspects relevant to the subject with enough depth and coverage of the wider issues under investigation. In order to ensure the representativeness of the questionnaire items, it is also important to carefully sample those questionnaire items (Cohen et al., 2018). The four different versions of the questionnaire, covering in total 128 scenarios reflecting the five criteria and four types of cyberbullying behaviour, facilitated this issue in the current dissertation. The five cyberbullying criteria and four types of cyberbullying behaviour investigated in this study were selected based on the literature review and relevant theories behind the construct to address the construct validity as suggested by Cohen et al. (2018). Furthermore, the focus group interviews identified the term that students use themselves when talking about cyberbullying behaviour and this term was used as an input in the questionnaire to facilitate the construct validity.

Validity issues were also addressed by translating and adapting the questionnaire to the Estonian context. The suitability of the questionnaire was pre-tested with Estonian students to determine the strengths and weaknesses of the question format, wording and order. Both processes are described with more detail in section 3.2 "Data collection instrument." In addition, during the data analysis stage, the techniques recommended by previous authors for validation were considered (e.g. Kruskal's Stress value).

4. FINDINGS

This chapter presents a summary of the main results in accordance with the proposed research questions in this doctoral thesis. More detailed results can be found from the individual articles (I–III). More precisely, sub-chapter 4.1 provides answers to research question 1 and research question 2. The topic of sub-chapter 4.2 is gender differences and the third question of the answer is thereby answered. Sub-chapter 4.3 focuses on age differences in correspondence with the fourth research question.

4.1 Labelling cyberbullying behaviour and assessments of its severity in the context of cyberbullying criteria and types of cyberbullying behaviour

This sub-chapter answers research questions 1–3 posed in the second part of the dissertation. More detailed results can be found from article I (Naruskov et al., 2012).

4.1.1 The term and the criteria of cyberbullying

4.1.1.1 Focus groups

The terms used by the students to label the behaviour described in the scenarios are presented in Table 10. It can be seen from Table 10 that the terms used by the students could be divided into four categories.

Students mainly labelled the scenarios in the non-cyber context. The terms referring to the cyber context were also noted by students: *bullying via the internet* (*internetis kiusamine*), *bullying via mobile phones* (*mobiiltelefonidega kiusamine*), *text-bullying* (*tekstisõnumitega kiusamine*), *cyber-attacks* (*küber-rünnakud*). However, there was no consensus among the students on these cyber-specific terms. These terms were considered inappropriate to describe all the scenarios under discussion mainly because the scenarios reflected bullying both on the internet and via mobile phones, but these terms referred to bullying in one or another medium. Moreover, the mobile phones were not considered part of the cyber world. Still, the term *cyberbullying* did not emerge from the focus groups. The best term to label the scenarios describing different situations or behaviours that could be considered cyberbullying was *bullying* (*kiusamine*). The term *bullying* reflected broad consensus among students in both focus groups when considering all the discussed scenarios, and therefore was used as an input term in the questionnaires.

Table 10. The terms used by students to label the scenarios

CONTENT	THE TERM	CATEGORIES
SCENARIOS 1–10	insulting	LABELLING THE BEHAVIOUR IN THE NON-CYBER CONTEXT
	yelling	
	bullying	
	taunt	
	flame	
	mental abuse/violence	
	humiliation	
	threatening	
	harassment	
	terrorism	
	cyber aggression	LABELLING THE BEHAVIOUR IN THE CYBER-CONTEXT
	cyber-attack	
	bullying via the internet	
	bullying via mobile phones	
	text-bullying	
	childish behaviour	DIRECT ASSESMENT OF THE BULLY'S BEHAVIOUR
	abnormal behaviour	
	disgraceful behaviour	
	perverse behaviour	
	ridiculous behaviour	
	sick behaviour	
	sick person	LABELLING THE PERSON (BULLY) AND HIS OR HER INTENTIONS/ MOTIVATIONS
	the need for attention/gaining attention	
	entertainment for bully	
	jealousy	

The adequacy and severity of the different criteria of cyberbullying behaviour was examined during the focus group interviews. Table 11 highlights the descriptive quotations from the focus groups interviews which reflect the nature of the conversation across the five cyberbullying criteria. All the discussed scenarios representing the three conventional criteria of traditional bullying (imbalance of power, intentionality and repetition) and cyber-specific bullying (anonymity and publicity) were considered important characteristics when labelling cyberbullying behaviour, but they had a different weight, mainly expressed in the way participants suggested to react to the scenarios and in student's severity assessments.

The criterion of power imbalance seemed to be central to determining whether the scenario can be labelled as cyberbullying or not and to assess its seriousness. If the criterion of power imbalance was absent, the behaviour was considered as a senseless incident and not serious, but when the victim was affected by the behaviour then the behaviour constituted cyberbullying and it was estimated as severe (see Table 11). The addition of other investigated criteria (e.g. repetition, anonymity etc.) increased the importance and severity of the power imbalance criterion. This means that when the new criteria were added to the scenario alongside the power imbalance criterion ("C was upset and didn't know how to defend himself/herself"), the balance of power between the victim and the bully were perceived as even more unequal by the students and thus the scenario was more severe as well.

Table 11. Illustrative quotations from focus groups across the five cyberbullying criteria (Naruskov et al., 2012)

Cyberbullying criteria	Illustrative Quotations
IMBALANCE OF POWER	"*If I don't care about it, then there's nothing about it. Then others will forget about it in a few days and nobody cares."* (older student)
INTENTIONALITY	"*Here he/she sends these things intentionally, it is not a joke anymore, he/she literally wants to hurt others and this is a form of psychological violence.*" (older student)
REPETITION	"*If M sends something once and then leaves [the victim] alone then it is not significant but if it is repeated, then perhaps it is a serious case.*" (older student)
PUBLICITY	"*The police can fine someone for this kind of bullying...actually it is deviant because this may truly hurt the person and damage his/her relationships*." (younger student)
ANONYMITY	"*The question still arises that who did it? And you can discuss that ... that who did it could be a dangerous person*" (younger student)

Students also recognise the importance of the intentionality and repetition criteria. If a person has the desire to hurt someone deliberately and/or repeatedly it would not be one-time joke anymore and therefore the action constitutes a bullying act and has a much more serious nature in the student's opinion (see Table 11).

The criterion of publicity created strong reactions among the students. Students acknowledged the importance of reputation and damaging existing relationships when labelling a public scenario as cyberbullying. More precisely, students pointed out that due to the large number of witnesses, the victim's reputation is damaged and that is what makes the case more serious (See Table 11). The severity assessments of younger student largely reflected how they advised the victim to react to such behaviour and in the case of a public act, they suggested going to the police. There was a scenario involving a public act, intentionality and the absence of the imbalance of power in the interview guide. It is notable that students from both focus groups suggested that in such circumstances (because of the public nature of the bullying act) the victim should care and feel disturbed. Furthermore, younger students also acknowledged that in the case of a public scenario, the fact that the bullying material spreads among many people allows the bully to hurt the victim several times.

In relation to the criterion of anonymity, the positions were not clearly uniform (see Table 11). The criterion "anonymity" was more confusing for younger students. They raised the question *"Why send such messages to someone? To hurt (him/her), but is it not so that with ordinary words you can hurt better than sending such kind of humiliating messages?* At the same time, younger students realised that an anonymous perpetrator could be a dangerous person and considered this scenario serious enough to turn to the police to identify the person doing this. When asking the students what they would do in the specific situation, the scenario with the presence of anonymity was the only case where the older students suggested seeking help from outside, for example, from a teacher. In all other cases, they considered themselves as active counterparts in solving the problem, suggesting that the victim should contact the bully in order to figure out the reasons behind his/her behaviour, fight back, ignore or block the bullying act, as well as explain to bystanders the reasons behind the bully's behaviour. However, in addition to blocking and ignoring the bullying behaviour, the majority of the younger students' suggestions related to the involvement of a bystander who has some kind of authority (e.g. parent, teacher, social pedagogue, police).

4.1.1.2 Questionnaire

A multidimensional scaling analysis was conducted with the data collected via the questionnaire to find out which criteria are important to students in order to evaluate scenarios as cyberbullying. Considering the stress values for one-, two-, three-, and four-dimensional solutions (.06, .03, .01 and .00 respectively), as well

as reviewing the "screen plot," revealed that the two-dimensional solution was the best. The level of variance explained by the two-dimensional configuration was 96.43%. The two-dimensional MDS solution is shown in Figure 7.

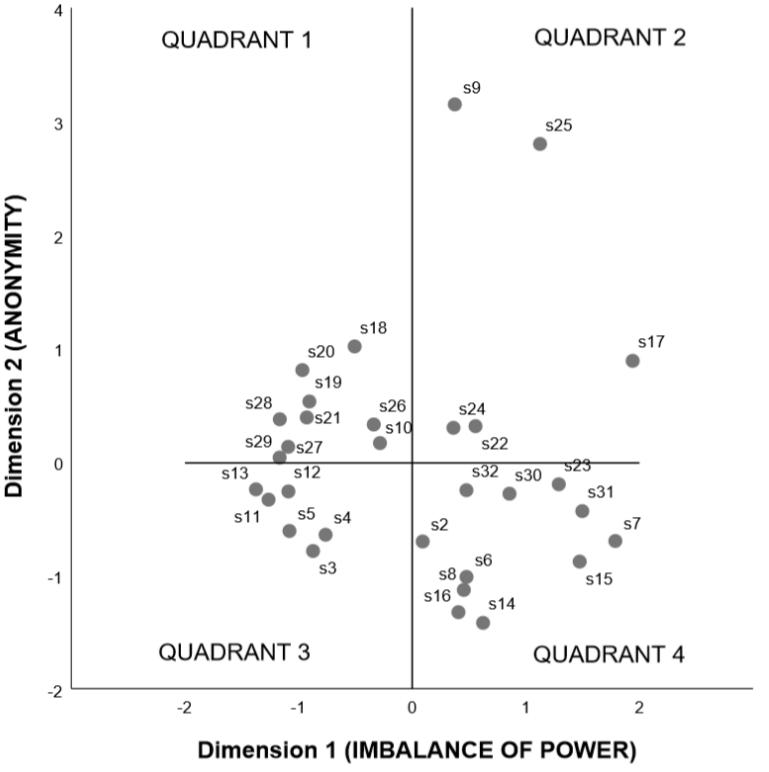

Figure 7. Multidimensional Scaling solution of the structure of scenarios for two dimensions (Naruskov et al., 2012, p. 335)

Note: s2–s32 are reflecting individual scenarios.

These two dimensions can be interpreted as the presence versus absence of the power imbalance criteria (dimension 1) and the presence versus absence of the anonymity criteria (dimension 2). More precisely in the context of dimension 1 (horizontal axis), scenarios on the left-hand side of the figure (quadrants 1 and 3) are characterized by the presence of the imbalance of power, whereas scenarios on the right-hand side of the figure (quadrants 2 and 4) are characterized by the lack of this criterion. In the case of dimension 2 (vertical axis), scenarios in the top of the figure (quadrants 1 and 2) are characterised by the presence of anonymity, whereas scenarios in the bottom of the figure (quadrants 3 and 4) are characterised by the lack of this criterion. There were some exceptions for both dimensions across the scenarios, which are described in more detail in Article 1 (Naruskov et al., 2012). To conclude, in order to evaluate a scenario as cyberbullying,

students first considered whether there was an imbalance of power or not between the parties, and second, whether the act was performed anonymously or not.

The issue of seriousness was also addressed in the context of a multidimensional scaling solution. After calculating the mean of seriousness for each scenario in each quadrant, a Kruskal-Wallis test was used to compare the means between all four quadrants. After identifying the differences between the groups ($p<0.01$), Mann-Whitney test was used to make further comparisons, which revealed that seriousness was only important in dimension 1 (imbalance of power) and not in dimension 2 (anonymity). More specifically, there were significant differences between quadrants 1 and 2 (Mann-Whitney $Zs = –2.803$; $p<0.01$), 3 and 4 (Mann-Whitney $Zs = –3.317$; $p<0.001$), 1 and 4 (Mann-Whitney $Zs = –3.685$; $p<0.01$), and 2 and 3 (Mann-Whitney $Zs = –2.739$; $p<0.01$). No significant differences were found between quadrants 1 and 3 or 2 and 4 (Mann-Whitney test in both cases $p>0.05$).

4.1.2 Types of cyberbullying

4.1.2.1 Focus groups

Quotations summarising the nature of conversation across the type of cyberbullying behaviour are presented in Table 12. Estonian students said that visual behaviour and impersonation represented the cyberbullying construct better than written-verbal behaviour and exclusion. The same two types were also considered more serious compared to the other two types of cyberbullying behaviour – written-verbal and exclusion. The visual type of cyberbullying was perceived as the most convincing and humiliating type of behaviour by the students. Impersonation was considered the most damaging type of behaviour (see Table 12).

In the case of written-verbal behaviour, the students were confused whether to consider written-verbal behaviour as a type of cyberbullying or not. More precisely, they did not understand why anyone would bully this way and thus perceived this as rather unrealistic because in their opinion it would be much easier and more effective to do such a thing in a face-to-face situation (see Table 12). It was also found that this type of message cannot be taken very seriously in the cyber context, but at the same time, students admitted that the seriousness of such incidents depends on the content of the message and the person behind the act, which were not clear in the scenarios.

It seemed that exclusion was perceived as more of a defensive action against bullying by students. Blocking and ignoring the bullying action was the main reaction suggested by the students if they were asked what they would do in specific situations. In order to assess the severity of exclusion, students would have liked to know what preceded the incident described in the scenario because they suspected that the initiator of the bullying (M) was a victim (see Table 12).

Table 12. Illustrative quotations from focus group interviews across types of cyber-bullying behaviours (Naruskov et al., 2012)

Type of cyberbullying behaviour	Illustrative Quotations
VISUAL	"A *picture can paint a thousand words*" (older student) "*It depends on whether M sends the image only to C or sends it to a wider audience. If he sends it to others, then yes...and you'll never know which kind of photos he still has...*" (older student)
IMPERSONATION	"*It is possible to make a lot of mess with these passwords….to spread personal information or to forward some things under C's name"* (older student)
WRITTEN-VERBAL	"*This is so simple and insignificant…if it happened through messages then it cannot be taken very seriously compared to a situation where he/she was said it in a face-to-face situation."* (older student)
EXCLUSION	"*What is the difference whether C is excluded or not... this online group is such a silly thing ...*" (younger student) "*Maybe C had bullied M before and now M wants to get back at him/her*." (older student)

4.1.2.2 Questionnaires

In the context of the four types of cyberbullying behaviour, the Generalized Euclidean Model was used to evaluate the consistency of the group configuration across the four types of behaviour. Table 13 presents the "dimension weights" for each type of cyberbullying behaviour across both dimensions.

Table 13. Dimension weights for each type of behaviour on the two MDS dimensions (based on Naruskov et al., 2012, p. 336)

	Dimension	
	1 (power imbalance)	2 (anonymity)
WRITTEN-VERBAL	.615	.287
VISUAL	.568	.378
EXCLUSION	.684	.059
IMPERSONATION	.560	.394

The high weights in the first dimension show the strong relevance of the imbalance of power in the evaluation of scenarios for each type of behaviour considered. The second dimension indicates a much lower relevance compared with the first across all behaviour types and has a greater relevance in the definition of cyberbullying for written-verbal, visual, and impersonation scenarios compared to exclusion scenarios.

4.2 Gender Differences in Perception of Cyberbullying Behaviour and Its Severity Assessments

The following sub-chapter gives an overview of the most relevant findings regarding research question 4: "What are the differences between Estonian boys' and girls' perceptions of the cyberbullying phenomenon in the context of five cyberbullying criteria and four cyberbullying types?" More detailed results can be found in article II (Naruskov & Luik, 2015).

4.2.1 Criteria of cyberbullying

Table 14 outlines the research findings regarding gender differences across the five criteria of cyberbullying behaviour. On the left-hand side of the table, the results of the independent samples t-test are presented. On the right-hand side of the table, the results of the Mann-Whitney test are provided.

Table 14. Comparison of boys and girls in labelling the questionnaire scenarios as cyberbullying (independent samples t-test) and their severity assessments (Mann-Whitney U test) according to the criteria of cyberbullying (Naruskov & Luik, 2015)

	Labelling cyberbullying behaviour				**Severity evaluations**			
Cyberbullying criteria	boys %[1]	girls %[1]	t-statistics	p-value	boys %[2]	girls %[2]	z-statistics	p-value
IMBALANCE OF POWER	89	91	–1.673	0.097	48	44	–1.102	0.270
INTENTIONALITY	84	85	–0.160	0.873	37	33	–1.038	0.299
REPETITION	81	81	0.182	0.856	43	32	–2.049	0.040*
PUBLICITY	76	79	–1.614	0.107	32	22	–2.940	0.003**
ANONYMITY	76	76	0.151	0.880	33	20	–3.082	0.002**

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

[1] The mean of the comparative groups computed using the non-parametric t-test, showing the percentage of boys and girls answering affirmative to the question "Is this bullying?"

[2] Percentage of boys and girls whose median rating was more than 2.5 on a four-point scale, whose estimates were considered serious.

There were no statistically significant differences in terms of how boys and girls labelled the scenarios as cyberbullying. In terms of severity, the boys evaluated scenarios with the presence of repetition, publicity, and anonymity criteria more serious than the girls did.

4.2.2 Types of cyberbullying

Table 15 provides an overview of the research findings regarding gender differences across the four type of cyberbullying behaviour.

Table 15. Comparison between boys and girls in labelling the questionnaire scenarios as cyberbullying (independent samples t-test) and their severity assessment (Mann-Whitney U test) according to behaviour type (Naruskov & Luik, 2015)

	Labelling cyberbullying behaviour				**Severity evaluations**			
Cyberbullying criteria	boys %[1]	girls %[1]	t-statistics	p-value	boys %[2]	girls %[2]	z-statistics	p-value
VISUAL	83	85	–0.870	0.385	48	44	–1.401	0.161
IMPERSONATION	83	83	–0.189	0.851	37	33	–0.834	0.404
WRITTEN-VERBAL	80	81	–0.592	0.554	43	32	–2.623	0.008**
EXCLUSION	58	58	0.031	0.976	32	22	–1.924	0.054

** − $p < 0.01$.
[1] The mean of the comparative groups computed using the non-parametric t-test, showing the percentage of boys and girls answering affirmative to the question "Is this bullying?"
[2] Percentage of boys and girls whose median rating was more than 2.5 on a four-point scale and whose estimates were considered serious.

The statistical analysis revealed that the boys did not name any of the four types of cyberbullying behaviour as cyberbullying more often than the girls did. In terms of severity, the boys' evaluations were higher for the written-verbal scenarios.

4.3 Age Differences in the Perception of Cyberbullying Behaviour and Severity Assessments

This sub-chapter provides a summary of the main findings that answer research question 5: "What differences exist in the perception of the cyberbullying phenomenon between Estonian students aged 12–13 and 15–16 years of age in the context of five cyberbullying criteria and four cyberbullying types?" More detailed results can be found in article III (Luik & Naruskov, 2018).

4.3.1 Criteria of cyberbullying

Comparing within the age groups revealed that in both age groups (12–13 and 15–16 years old) scenarios involving the criterion of power imbalance were more likely to be labelled as cyberbullying (Paired samples t-test, in all cases $p<0.001$). Scenarios representing the intention or repetition criteria were considered equally the second most important criteria in terms of labelling behaviour among both age groups (paired samples t-test, p value ranging between $p<0.001$ and $p<0.001$). The scenarios representing the publicity and anonymity criteria were the least labelled as cyberbullying; these results were consistent in both age groups.

The pattern was similar in the case of the students' severity evaluations for all cyberbullying criteria. In short, scenarios with the presence of the imbalance of power criteria were perceived as being more severe than scenarios with the other criteria (Wilcoxon signed rank test, in all cases $p<0.001$) followed by scenarios involving the criteria of intention and repetition. These results were the same in both age groups. Differences could be identified between the criteria of intention and repetition and the criteria of publicity and anonymity (Wilcoxon signed rank test, in all cases $p<0.001$), but between the criteria of intention and repetition there was no statistically significant difference (Wilcoxon signed rank test; among younger students $Z = –1.43$ and among older students $Z = –1.70$, $p>0.05$ in both cases).

The differences that appeared within and between the age groups in the context of labelling the behaviour and severity evaluations are presented in Table 16.

Table 16. Comparison between age group 1 (12–13 years) and age group 2 (15–16 years) in labelling questionnaire scenarios as cyberbullying and their severity assessment according to the cyberbullying criteria (Luik & Naruskov, 2018)

Labelling cyberbullying behaviour	
Differences WITHIN the age groups	**Differences BETWEEN the age groups**
– No differences within the age groups	– Younger students labelled scenarios with imbalance of power criterion more likely as cyberbullying compared to the older students (Independent samples t-test, $t=2.01$, $p<.05$)
Severity evaluations	
Differences WITHIN the age groups	**Differences BETWEEN the age groups**
– Younger students perceived scenarios with a public aspect as more severe than those involving the criterion of anonymity (Wilcoxon signed-rank test, $Z= –3.24$, $p<0.001$)	– Younger students evaluated scenarios with a publicity criterion more severe than older students (Mann-Whitney U-test, $U=11887.5$, $p<0.05$)

It can be seen from Table 16 that younger students labelled one criterion out of five as cyberbullying more compared to the older students and there were also differences in terms of their severity evaluations concerning the two cyber specific criteria of cyberbullying.

4.3.2 Types of cyberbullying

The results of the comparison between the two age groups in labelling scenarios as cyberbullying and evaluations of severity in the context of cyberbullying typologies are presented in Table 17.

Table 17. Comparison between age group 1 (12–13 years) and age group 2 (15–16 years) in labelling questionnaire scenarios as cyberbullying and their severity assessments according to types of behaviour (Luik & Naruskov, 2018)

Labelling cyberbullying behaviour	
Differences WITHIN the age groups	**Differences BETWEEN the age groups**
– Both groups labelled scenarios representing the types 'visual' or 'impersonation' more often as cyberbullying compared to two other types (written-verbal and exclusion) (Paired samples t-test; $p<0.05$ and $p<0.001$), but in the case of older students there was no statistically significant difference between impersonation and written-verbal types (Paired samples t-test; $p>0.05$)	– Younger students marked exclusion as bullying more than older students (Independent samples t-test, $t=2.53$, $p<0.05$)
Severity evaluations	
Differences WITHIN the age groups	**Differences BETWEEN the age groups**
– Older students evaluated visual cyberbullying as more severe in comparison to impersonation (Wilcoxon's sign test, $Z= –2.19$, $p<0.05$) – Younger students perceived impersonation more severe compared to visual cyberbullying (Wilcoxon's sign-rank test, $Z= –2.39$, $p<0.05$)	– Younger students perceived exclusion as more severe compared to older students (Mann-Whitney U-test, $U=12033.5$, $p<0.05$)

It can be seen from Table 17 that younger students perceived exclusion as cyberbullying more and evaluated it as more serious compared to older students. The impersonation and visual type of cyberbullying were perceived differently by the two age groups.

5. DISCUSSION

In the following sub-chapters, the findings are discussed in the context of the five research questions. Research question 1 and research question 2 are discussed together in one sub-chapter, followed by the remaining three research questions which are discussed in separate sub-chapters.

5.1 The Term and the Criteria of Cyberbullying

In terms of research question 1, the analysis of the focus group interviews showed that "bullying" was considered the most appropriate term to label cyberbullying behaviour. This result is partly supported by the study by Nocentini et al. (2010), where the term "bullying" was proposed spontaneously by students from Italy, Spain and Germany. The term "cyberbullying" was spontaneously proposed only by German students, which indicates that the word "cyber" is not widely used by adolescents, especially in Latin-based languages (Nocentini et al., 2010). However, it should be considered that the data from this dissertation was collected in 2011, when smartphones were not as widespread as they are today. Now, internet platforms and mobile phones strongly overlap, and therefore the distinction does not have a significant effect (Thomas et al., 2015), and this may affect how the term is perceived now. Nevertheless, in 2011, based on the focus group results, we decided to use the term "bullying" as an input term in the questionnaire.

In the context of research question 2, MDS analysis indicated that when adolescents evaluate a scenario as cyberbullying, they mainly consider the presence of two criteria: imbalance of power and anonymity. The relevance of the imbalance of power criterion in the first dimension was confirmed for all four types of cyberbullying behaviour. In terms of severity, adolescents perceived scenarios with the power imbalance criterion as more severe than scenarios without. The importance of the imbalance of power criterion was also evident from the results of the focus group analysis, both in the context of labelling the behaviour and in terms of severity estimations. Focus group results showed that besides the direct consequences that referred to an imbalance of power, the presence of the other investigated criteria (repetition, intentionality, publicity, and anonymity) had an impact on the severity evaluations in the sense that they further reinforced the imbalance of power criterion. Other studies have similarly found that for instance the anonymous and public nature of cyberbullying may create an imbalance in power relations (Dooley et al., 2009; Kowalski et al., 2008; Slonje & Smith, 2008; Sticca & Perren, 2013). The importance of the imbalance of power criterion has also been highlighted in traditional bullying contexts (Vaillancourt et al., 2008; Volk et al., 2014) and in cyberbullying contexts (Cuadrado-Gordillo & Fernández-Antelo, 2016; Moreno et al., 2018; Palladino et al., 2017; Talwar et al., 2014). For instance, in the context of the definition, Cuadrado-Gordilloa and Fernández-Antelo (2016) found that Spanish students

considered imbalance of power as one of the criteria defining cyberbullying. A recent study by Moreno et al. (2018) showed that imbalance of power was the second most common component of the Uniform Definition of Bullying proposed by participants in cyberbullying contexts. Furthermore, in terms of severity, the study by Palladino et al. (2017) showed that for the participants the most important criterion for defining the severity of a cyberbullying scenario was the imbalance of power. The systematic review by Berne et al. (2013) indicated that in 44 definitions presented in instruments designed to assess cyberbullying, only 13 contained the imbalance of power criterion. Furthermore, Peter and Petermann (2018) excluded the imbalance of power criterion from the definition and treated it as an additional influencing factor. It should be noted that we focused on student perceptions while Peter and Petermann (2018) made their decision based on attributes most frequently used by previous cyberbullying researchers. Considering the results of this dissertation and results from other studies, which have also focused on the perspective of adolescents (Cuadrado-Gordillo & Fernández-Antelo, 2016; Moreno et al., 2018; Palladino et al., 2017; Talwar et al., 2014), we would rather suggest that the imbalance of power criterion is a defining criterion of cyberbullying.

Based on MDS results, anonymity in the second dimension, was the second most relevant criterion that Estonian adolescents considered when labelling a scenario as cyberbullying. In brief, to evaluate a scenario as cyberbullying, participants considered whether the act was performed anonymously or not. The systematic review by Berne et al. (2013) about cyberbullying instruments showed that none of the 44 definitions included the anonymity criterion. In terms of severity, as opposed to the first dimension (imbalance of power), the presence or absence of the anonymity criterion did not have an impact on the evaluation of severity. This in line with the authors who acknowledge that perceived severity might contribute to the cyberbullying definition, but it does not coincide with it (Palladino et al., 2017). Based on the results of the focus group and the previous study by Nocentini et al. (2010), we would have expected that seriousness also plays a role in the context of the anonymity criterion, and therefore the result of the quantitative phase was rather surprising. More precisely, the analysis of the focus group interviews showed that the students' severity ratings were largely reflected in there recommended response to the scenario, and in the case of scenarios representing the anonymity criterion, younger students suggested turning to the police to identify the person doing this. For older students, anonymity was the only criterion where they suggested to look for help from outside (teacher). In all other scenarios, they considered themselves as active counterparts in solving the problem**.** Based on the focus group findings, we can assume that anonymity interacts with imbalance of power. According to previous authors, not knowing the perpetrators identity may put the victim at a lower power status than the bully (Vandebosch & Van Cleemput, 2008). Since it is hard to fight against an enemy you do not know (Slonje et al., 2013; Smith et al., 2013) students are more willing to seek help from outside (e.g. police or teachers) and rely less on their own coping skills. Conversely, if the perpetrator is known, the power relations are

more equal and adolescents feel they can handle the situations by themselves (Cuadrado-Gordillo & Fernández-Antelo, 2016). The partially conflicting results from the focus groups interviews and the data gathered via the questionnaires may be explained by the fact that in the questionnaires the anonymity criterion was handled more systematically compared to the focus group interviews where anonymity was represented in one of ten scenarios. Furthermore, in the questionnaires the anonymity criterion was presented in the context of all four types of cyberbullying behaviour, while in the interviews the anonymity criterion was presented only in the context of the written-verbal type of behaviour. Other authors have acknowledged that the criterion of anonymity is multifaceted, causing mixed feelings and opinions among students (Dredge et al., 2014; Palladino et al., 2017), which was also evident in our study.

Our results are consistent with the study by Mishna et al. (2009), who found that students perceived anonymity to be part of cyberbullying. The recent study by Moreno et al. (2018) showed that when describing cyberbullying incidents, anonymity was one of the components spontaneously and repeatedly proposed by adolescents/young adults and adults. Other studies have also shown that the sense of anonymity predicts cyberbullying behaviour (Barlett, 2015) and that anonymous scenarios are worse than non-anonymous ones (Sticca & Perren, 2013). At the same time our results are inconsistent with studies which have suggested that anonymity is not defining criterion of cyberbullying (Cuadrado-Gordillo & Fernández-Antelo, 2016; Nocentini et al., 2010; Peter & Petermann, 2018). For example, Peter and Petermann (2018) treated anonymity as an additional influencing factor of cyberbullying but not as a defining attribute. Disparate results can be explained with cultural differences since studies on cyberbullying behaviour have indicated cultural-specific aspects related to adolescent perceptions of cyberbullying (Nocentini et al., 2010; Palladino et al., 2017). For instance, Italian participants considered situations led by a friend as more hurtful compared to German participants, who reported that situations prepared by an unknown person as scarier (Palladino et al., 2017). In conclusion it seems that the contradiction is encoded in the criterion of anonymity. For instance, the anonymous nature of cyberspace is constantly emphasized; at the same time, it is known that activities in the cyber-environment are largely traceable and identifiable (Barlett, 2015; Kowalski et al., 2019). Accordingly, the results of the research have shown that despite the anonymity of the cyberworld, in most cases the identity of the cyberbully was known to both the victim and the bystanders (Lapidot-Lefler & Dolev-Cohen, 2015). Mishna et al. (2009) found similarly that although students perceived anonymity to be part of cyberbullying, many of the cyberbullying incidents they described were not anonymous and occurred in the context of their social groups and relationships. Furthermore, researchers have pointed out that there is a distinction between the actual and perceived anonymity in cyberspace, which means that feeling anonymous and being anonymous are not the same thing (Barlett, 2015; Mishna et al., 2009). In line with other authors (Bryce & Fraser, 2013; Dredge et al., 2014; Palladino et

al., 2017) we admit that the role of anonymity in cyberbullying is controversial and needs further study.

The second dimension (anonymity) had lower relevance in the definition of cyberbullying in exclusion scenarios compared to the other three types (written-verbal, visual, impersonation). This is consistent with the analysis of individual scenarios (Naruskov et al., 2012), where in the majority of scenarios exclusion showed the lowest percentages of frequency compared to other types of behaviour. Furthermore, this outcome is partly in line with focus group results were exclusion was considered less serious compared to impersonation and visual behaviours. In short, it is possible that Estonian students do not perceive anonymous exclusion as cyberbullying, and therefore they do not consider such cases to be serious.

Since the MDS concentrated on two criteria, imbalance of power and anonymity, then the focus group analysis provide a better insight into the topic of labelling behaviour and evaluating its severity across the other three investigated criteria (intentionality, repetition and publicity). The results of the MDS indicated that the other two criteria specific to traditional bullying, repetition and intentionality, were not considered relevant when labelling cyberbullying behaviour. However, based on the focus group results as well as previous research (Cuadrado-Gordillo & Fernández-Antelo, 2016; Nocentini et al., 2010), it cannot be said that these criteria are not important to students. These criteria were not in the foreground, but rather connoted the context when labelling the behaviour and evaluating the seriousness of the scenarios. As stated above, these criteria had an impact on the severity evaluations in the sense that they further reinforced the imbalance of power criterion.

Besides the criterion of imbalance in power, publicity was the second criterion that caused the most reactions among students during the focus group interviews. The importance of the publicity criterion also emerged in the study by Talwar et al. (2014). The importance of this criterion for Estonian students was mainly reflected in their severity assessments. This result is consistent with studies showing that public cyberbullying is perceived as more severe than private cyberbullying (Chen & Cheng, 2017; Dredge et al., 2014; Nocentini et al., 2010; Sticca & Perren, 2013). The scenario containing the publicity criterion reminded older students of the Estonian movie *Klass* (The Class), which was a popular movie about school bullying that ended with a school shooting. In the case of the public scenario, the older students thought it would be good material for a second part for this movie. This is an interesting link, which the participants created in terms of publicity because the content of the movie was based on traditional bullying. Furthermore, in the case of a public scenario, Estonian students also had a very strong perception of the reputational damage that accompanies public cyberbullying, consistent with other studides (Bryce & Fraser, 2013; Sticca & Perren, 2013). In conclusion, although the MDS did not identify publicity as a core criterion of cyberbullying, the focus group results showed that this criterion included strong connotations about the how the nature of the attack was perceived in terms of severity.

5.2 Types of Cyberbullying

In terms of research question 3, which targeted the relevance of the four cyberbullying types, students considered visual cyberbullying acts and impersonations as more relevant when labelling the behaviour and evaluated them as more serious compared to exclusion and written-verbal behaviour. In 2012, we assumed that this might have been due to the extremely serious cyberbullying incidents reported in Estonian media, which included a significant visual component, but also impersonation in the context of pretending to be someone else. However, these results can also be explained from other perspectives that are discussed below.

The focus groups results showed that visual bullying was considered the most convincing and humiliating type of behaviour for Estonian students. Cyber-communication is largely centred on images and videos (Pinterest, Instagram, YouTube, Tumblr and other social networking sites). This has also affected adolescents as the active users of the cyber world who have a strong "photo-voice" (Spears et al., 2013). Furthermore, photographs (e.g. selfies) and videos posted on Pinterest, Instagram, YouTube, Tumblr and other social networking sites are an integral part of the adolescents' lives and identity through which they express their social context, their emotions and their view of themselves and their world (Spears et al., 2013), and that may be the reason why visual scenarios emerged more strongly from the focus groups interviews. The importance of visual forms of cyberbullying has also emerged in earlier studies (Chen & Cheng, 2017; Menesini et al., 2011; Slonje & Smith, 2008; Smith et al., 2008). For instance, Menesini et al. (2011) found that Italian adolescents perceived visual forms of cyberbullying as the most severe cyberbullying acts. Furthermore, the study by Chen and Cheng (2017) showed that Taiwanese students rated visual cyberbullying behaviours that occurred in public as more serious than private ones. In line with other studies (Chen & Cheng, 2017; Menesini et al., 2011; Slonje & Smith, 2008), we suggest that in the case of visual cyberbullying, publicity is an important factor for students since the cyber-environments to which the humiliating pictures and videos are posted (e.g. Facebook, Instagram, YouTube) are public in nature. Although the scenario that reflected the visual bullying act did not include the publicity criterion, older Estonian students still acknowledged the topic of publicity during the focus group interview by saying that the large audience that witnesses the bullying makes it worse. Since these assumptions are mainly based of the focus group results then they should be further validated by future studies.

Regarding impersonation, Estonian students considered it as the most damaging type of behaviour because it causes lot of reputational trouble for the victim by spreading private information or writing nasty things about others in their name. This result is consistent with the outcomes of other studies (Bryce & Fraser, 2013; Chen & Cheng, 2017). Taiwanese students found similarly that 'impersonating me online to do bad things' was the most severe behaviour (Chen & Cheng, 2017). Students from the UK expressed strong concern about the

possibility of having their online identities compromised and how it impacts interpersonal trust with peers. Based on the focus group results, we agree with Bryce and Fraser (2013) that in addition to the psychological impact, cyberbullying also has a social dimension and adolescents are aware of that.

Based on the focus groups analysis, written-verbal cyberbullying acts and exclusion remained rather in the background when labelling the behaviour and evaluating the seriousness of different types of cyberbullying behaviour. Previous studies have shown similar results in the case of the written-verbal type of cyberbullying (Menesini et al., 2011; Slonje & Smith, 2008). Menesini et al. (2011) explained the low severity of insults on instant messaging on the basis of cultural peculiarities, where some light offences in face-to-face situations may be part of the communication. Swedish adolescents evaluated email and text message bullying as less harmful than traditional bullying because it was not seen as so personal compared to picture/video clip bullying and phone call bullying (Slonje & Smith, 2008). The matter of personal contact seemed to be the case for Estonian students as well because they emphasized that it would be much easier and more effective to say such things in face-to-face situations. The results of the EU Kids Online 2018 survey showed that sending and/or receiving messages was the most frequently mentioned internet activity among Estonian participants (Sukk & Soo, 2018). Consequently, we may also assume that since adolescents spend most of their time sending and receiving messages then the insults received through this medium do not seem to be serious and considered as cyberbullying. When analysing the research results, the design of focus group interviews should also be considered. Seven of the ten scenarios presented during the interviews were formulated in the context of the written-verbal type. The remaining three scenarios, proposed at the end of the interview, referred to the other types of cyberbullying (visual, impersonation, and exclusion). It could be that the written-verbal type scenarios did not create strong reactions among students since it was already familiar to them.

Exclusion was perceived to be the least serious by students during the focus groups interviews. This finding is partially supported by the study by Chen et al. (2015), who found that exclusion from group work was rated as infrequent and less serious behaviour among Taiwanese students. We suggest that Estonian adolescents perceive exclusion as a coping strategy against cyberbullying because they strongly recommended to exclude or block the 'bully' from their buddy list in order to avoid or put an end to the cyberbullying. At the same time, the more recent results from the EU Kids Online survey showed that 28% of Estonian students who had experienced incidents that could be considered as cyberbullying admitted that they were left out of the group or activity in an online environment (Sukk & Soo, 2018). This was the second most mentioned cyberbullying method in the EU Kids Online study (Sukk & Soo, 2018). We suggest that the item wording may affect the way exclusion is perceived by students in different studies. We referred to exclusion using the phrase "*M took C out of their online group."* Maybe the phrase did not convey the nature of exclusion for students. At the same time, the result may also be a sign of how the internet and

websites are changing. Different social networking sites (e.g. Instagram, Facebook) are engaged in continuous development. For instance, Facebook's events and groups features are more widely used in 2019 among users than ten years ago at the time the data from this dissertation were collected. Although these features facilitate communication and make organizing events easier, we can assume that they are also a breeding ground for social exclusion. This assumption should be further validated by future studies.

5.3 Gender Differences

To ensure the validity of a general measurement, it is important to know whether boys and girls perceive the phenomenon similarly. This issue is important to address since studies have shown contradictory results in the context of gender and cyberbullying (Baldry et al., 2015; Kowalski et al., 2014; Tokunaga, 2010). In relation to research question 4, it was found that the boys' and the girls' evaluations were similar across five cyber-bullying criteria and across the four types of cyberbullying behaviour when labelling the scenario as cyberbullying. It must be emphasized that there were no gender differences in the context of the two defining criteria of cyberbullying (imbalance of power and anonymity) that were identified based on the MDS analysis. This result is in line with the study by Smith et al. (2002), who found in the context of traditional bullying that boys and girls share a common understanding of what the term means to them. The fact that boys and girls perceived the construct similarly in the context of criteria and cyberbullying types gives some certainty for the researchers when measuring the construct, in contrast to a situation where the construct would have hypothetically been perceived in quite an opposite manner based on gender. Caution must be used when generalizing on the basis of this research because of methodological reasons; therefore, this outcome should be further validated by future studies.

Gender differences were discovered in terms of student severity assessments. Boys perceived scenarios with the presence of repetition, publicity, and anonymity more seriously than the girls did. The results of other studies have also shown that gender differences exist in the perceived severity of cyberbullying (Chen et al., 2015; Chen & Cheng, 2017). This outcome can be explained from several perspectives. Studies have shown that boys and girls are aggressive in different ways (Nansel et al., 2001). It is suggested that boys typically use more physical forms of bullying and girls are more involved in forms of indirect or relational bullying (Nansel et al., 2001; Smith & Ananiadou, 2003). From the theoretical perspective, if we consider cyberbullying as a form of indirect or relational aggression it may be assumed that girls did not perceive these scenarios as so serious because they may have witnessed or experienced this type of cyberbullying during their lifetime more frequently than boys, and thus perceived such behaviour as a normative dimension of their online interaction. By contrast, boys, who are more associated with direct (physical) bullying (Nansel et al., 2001) may have perceived these scenarios as more serious since they might not have had so

much experience with such behaviour. In this context it should be emphasized that two of the criteria perceived as more severe by boys were cyber-specific criteria (anonymity and publicity). To explain this assumption, parallels can be drawn with the theory of normative beliefs towards bullying, which means that if students feel that bullying is an integral part of their lives and that it is "harmless" then they are less likely to feel upset when bulling or witnessing the bullying behaviour (Espelage & Swearer, 2003). The theory of normative beliefs may also be transferable to severity assessments in the context of cyberbullying behaviour, and therefore that girls were more desensitized towards this kind of behaviour. Similarly, Leduc et al. (2018) have suggested that student desensitization towards cyberbullying may be related to the frequency of witnessing behaviour as a bystander or even as a perpetrator. At the same time, some studies on gender have shown the opposite results (Chen et al., 2015; Chen & Cheng, 2017). The study conducted in Taiwan showed that girls have higher perceived severity of cyberbullying behaviours than boys (Chen et al., 2015; Chen & Cheng, 2017). This may be explained in terms of cultural differences because studies about cyberbullying have shown that the perception and experience of the cyberbullying construct and its severity may depend on cultural peculiarities even within European countries (Menesini, 2012; Nocentini et al., 2010; Palladino et al., 2017; Sorrentino et al., 2019). Due to methodological reasons, gender differences and inferences should be interpreted with caution and validated by future studies.

In terms of the types of behaviour, evaluations by boys were higher for written-verbal scenarios compared to evaluations by girls. Similarly, other studies have shown that the type of behaviour used in cyberbullying is sometimes shown to be related to gender (Menesini et al., 2011; Slonje & Smith, 2008; Sorrentino et al., 2019). In particularly, the study by Menesini et al. (2011) showed that nasty text messages presented high levels of severity for male participants. Furthermore, the study by Slonje and Smith (2008) showed that boys were statistically significantly more likely to bully using text-based bullying compared to girls. Although, it partly contradicts the previous discussion on the severity of the cyberbullying criteria and gender differences, it may be assumed that since boys use text messages to bully others, they can also better assess its seriousness. However, these are only assumptions that need to be verified with the sample of Estonian students.

5.4 Age Differences

In terms of research question 5, the results indicated that a power imbalance was the main criterion for students from both age groups, both in a definitional and severity context. The relevance of power imbalance was also evident in the focus group interviews and MDS results, and its importance has been demonstrated in earlier studies of traditional bullying (Volk et al., 2014) and cyberbullying (Palladino et al., 2017; Talwar et al., 2014; Vaillancourt et al., 2008).

In addition to imbalance of power, criteria that are also considered defining in the context of traditional bullying – intentionality and repetition – emerged when labelling the cyberbullying behaviour and evaluating the seriousness of the scenarios. This result refers to the need to treat the phenomenon of cyberbullying within the broader framework of adolescent aggression and traditional bullying as also suggested by other authors (Mehari et al., 2014; Olweus, 2012). At the same time, we cannot not ignore or underestimate the specific details of cyberbullying, the importance of which has been demonstrated in this dissertation and other studies (Ackers, 2012; Barlett, 2015; Slonje et al., 2017; Sticca & Perren, 2013).

Two cyber-specific criteria, anonymity and publicity, remain in background when labelling cyberbullying behaviour and evaluating the severity of the scenarios. At the same time, the data analysis indicated that criteria specific to the cyber environment were perceived slightly differently by different age groups. In general, cyber-specific criteria seemed to be more important to younger students than older students. In terms of severity, younger students perceived scenarios with a public aspect as more severe than those involving the criteria of anonymity. Focus group interviews also showed that one criterion specific to the cyber environment – anonymity – was more confusing for younger students. Furthermore, younger students perceived scenarios with the publicity criterion as more serious than older students. This result is in line with previous studies, which have shown that anonymity and/or publicity may connote the context of cyberbullying by having an impact on the perception of the severity of cyberbullying (Nocentini et al., 2010; Sticca & Perren, 2013). The focus groups showed that older students considered themselves an active counterpart when dealing with cyberbullying incidents by believing that they have the skills and knowledge to deal with the problem. Controversially, younger students relied more on external help from parents, teachers, social pedagogues and the police. We could suggest that while a large audience is involved in the case of public bullying, younger students may realize that it is difficult to control public cyberbullying even for those they turn to for help and support. If this assumption is true then this result indicates the need to deal with help-seeking behaviour, especially in older students to increase faith in the help provided by parents, teachers, school personnel and the police because some of the solutions they offered during the focus group interviews may have the opposite effect in real life. This is an import issue to consider, since studies have shown that as students get older, they become less likely to defend victims or report an act of on-line aggression (Leduc et al., 2018) and low communication with parents is a risk factor for cyber-victimization (Mesch, 2009).

Studies have shown that visual bullying (Nocentini et al., 2010; Pieschl et al., 2013; Smith et al., 2008) and impersonation (Bryce & Fraser, 2013) are a matter of concern for adolescents. In the context of age, this was also the case in our study. When labelling a behaviour as cyberbullying, younger students highlighted scenarios involving impersonation and visual types of cyberbullying. The pattern was similar for older students but there was no statistically significant difference between labelling scenarios represented by impersonation and written-verbal

types of cyberbullying. These results show a contradiction with the data collected in the focus group interviews, where the two types – visual and impersonation – seemed to be more relevant for both age groups than the other two types – written-verbal and exclusion. The reason why older students were able to better understand the nature of the different types of bullying in the questionnaires could be due to more advanced abstract cognitive thinking and emotional development (Barlett & Coyne, 2014). Furthermore, in the focus group interviews, the first six scenarios representing the five criteria of cyberbullying behaviour were presented in the context written-verbal behaviour. It could be that after the six scenarios were presented, the written-verbal scenarios looked familiar and somehow normalized for older students when discussing the type of behaviour and therefore remained in the background for them. In the questionnaires, the four types of cyberbullying behaviour were presented equally.

In terms of severity, older students perceived impersonation as more severe compared to the visual type of behaviour; the younger group evaluated the visual type as more serious compared to impersonation. Based on this we would suggest that bullying prevention and intervention programmes must consider that adolescents of different ages may need different support and help when witnessing or dealing with the problem of cyberbullying.

The scenarios including exclusion were perceived as cyberbullying the least and were also evaluated as the least severe. This was especially the case among older students. This outcome may partially be explained with the results of the focus group analysis, which showed that in the case of scenarios including exclusion, students would like to know the reason behind the bully's actions. The older students tried to rationalize what happened by suggesting that maybe C (the victim) had bullied M (the bully) before. This may be the sign of "ruthless socialization" which means that students often justify abusive behaviours by accusing and blaming the victim of causing the peer aggression (Teräsahjo & Salmivalli, 2003). In terms of age differences, Leduc et al. (2018) found that when justifying a negative on-line behaviour, the deviant rules were more common to older students (13 to 16 years) than younger students (8 to 12 years). Here we must acknowledge that the age groups investigated in the study by Leduc et al. (2018) differed from the age groups focused on in this dissertation.

In summary of the age comparison, there were no diametrically opposite perceptions of cyberbullying between the two age groups. The results of the current study are encouraging for researchers who want to develop valid instruments to measure cyberbullying behaviour across different age groups. However, due to methodological reasons, gender issues should be interpreted with caution and validated by future studies.

6. CONCLUSIONS AND IMPLICATIONS

The following paragraph provides conclusions with references to the theoretical and practical implications, the limitations of the studies, and suggestions for further research. Due to methodological reasons, all the results and inferences should be interpreted with caution and validated by future studies.

6.1 Theoretical implications

One criterion that emerged at both the qualitative and quantitative stages of the research was the imbalance of power criterion. In addition to this criterion, the MDS also recognized the importance of the anonymity criterion. In terms of age, the results showed that the imbalance of power criterion was followed by the criteria of intentionality and repetition for students from both age groups when labelling the behaviour and evaluating its seriousness. Therefore, the three criteria that emerged in the context of age were criteria specific to traditional bullying. This was also evident in the focus group interviews, where students recognized the importance of the intentionality and repetition criteria. These results are in line with a previous study conducted with Estonian students in the context of traditional bullying, where all three criteria of traditional bullying also emerged (Kõiv, 2002). Our results may suggest that cyberbullying can be placed and investigated in the general context of aggressive behaviour and traditional bullying, as suggested by other authors (Mehari et al., 2014; Olweus, 2012). At the same time, the results showed that because of the specific nature of the cyber-environment, the criteria investigated here may acquire different meanings and interact with each other. For instance, in terms of public scenarios it was acknowledged that these can be taken as repeated actions, since the material spreads among many people and allows the bully to hurt the victim several times. Furthermore, the importance of the anonymity criterion revealed by the MDS analysis and strong reactions caused by public scenarios during the focus group interviews cannot be ignored. In light of the results of this research, it seems that publicity and anonymity cannot be interpreted as strict criteria that define cyberbullying, but rather as *additional influencing factor*s (term suggested by Peter and Petermann, 2018) that help to understand the specifics of the environment and as aspects that may play role in terms of how the imbalance of power is perceived. Many researchers seek ways to measure traditional bullying and cyberbullying simultaneously (Sumter, Valkenburg, Baumgartner, Peter, & Hof, 2015; Thomas et al., 2015). Although cyberbullying can be considered under the more general definition of bullying, this process should take into account the specifics of cyberbullying to capture the complexity of this behaviour, as also pointed out by Menesini (2012). In conclusion, the results of this dissertation may indicate that in order to connote the cyber context when researching cyberbullying, instruments could include a reference to the specifics that accompany cyber communication

to contribute to the understanding of what is being measured. In terms of anonymity and publicity, these references must be worded in such a way that the definition does not exclude cyberbullying cases that are not anonymous or have occurred privately between two people. One possible solution is similar to Tokunaga's approach (2010, p. 278), which suggests an addendum to the definition of cyberbullying to clarify the specific context in which the bullying occurs. Another option is to add separate items to the questionnaire concerning the anonymity and publicity aspects of cyberbullying, as suggested by Thomas et al. (2015).

In terms of age and gender there was no diametrically opposing differences on how the scenarios were labelled as cyberbullying across the five cyberbullying criteria and types of cyberbullying behaviour. Although we must be cautious for methodological reasons about making generalizations from our results for a larger population, the results of this dissertation are rather encouraging for researchers who want to develop valid instruments to measure cyberbullying behaviour across gender and age groups.

The analysis of the focus group interviews revealed that students considered the visual acts of cyberbullying and impersonation as more relevant when labelling the behaviour and evaluated them as more serious compared to exclusion and written-verbal behaviour. As an implication for developing a definition and instruments, we suggest using sub-scales that measure the level of severity associated with a particular type of cyberbullying since this information could provide useful information when interpreting student experiences and makes comparisons possible between different behaviours, as also suggested by Thomas et al. (2015).

6.2 Practical implications

6.2.1 Criteria of Cyberbullying

- In our scenarios the definition of an imbalance of power referred directly to the effects on the victim: "*C was upset and didn't know how to defend himself/ herself.*" One component of responsible behaviour is empathy (Mehari et al., 2014; Willard, 2007). From the perspective of bullies, the key element in prevention strategies is to ensure that students are empathically aware of the consequences of their behaviour towards other people (Slonje et al., 2013; Slonje et al., 2017; Willard, 2007). The wording of the scenario might have provoked empathic feelings in the participants resulting in strong reactions in their responses. If this assumption is true, then it is important that the empathic response also translates into the way children react to cyberbullying when witnessing it. The importance of empathy training has already been emphasized also in several cyberbullying prevention and intervention strategies (Smith, 2016b). Together with other authors (Macaulay, Boulton, & Betts, 2019) we acknowledge that it is important to make sure students are aware of and practice the appropriate bystander responses in both online and offline domains.

- Prevention and intervention programmes must address the issues of publicity and anonymity that cyberbullying entails. For instance, how can young people prevent or respond to anonymous and public cyberbullying as victims or bystanders and how can they protect their privacy in the cyber-environment. In addition, how can they manage relationships that are anonymous and relationships with people they know in real life. These issues should also be targeted with parents and teachers so that they are ready to offer help and guidance on these topics. If the bullies are aware that in most cases the anonymity is only illusory, it might make them think before they act (Sticca & Perren, 2013). If the victim knows that the bully can be identified, this will increase their perceived sense of control and reduce the feeling of fear (Sticca & Perren, 2013).
- In terms gender, evaluations by boys and girls were similar across the five cyber-bullying criteria when labelling the scenarios as cyberbullying. Gender differences were discovered in terms of the student's severity assessments. In all cases boys' severity evaluations were higher than girls' evaluations. The results show that boys tend to take cyberbullying more seriously than girls. It is notable that in addition to repetition, boys' estimations were higher for the two cyber-specific criteria. These results help parents and teachers understand the specific problems that boys are facing in the cyber world. Shariff (2008) writes in his book that girls are portrayed as fragile and incompetent users of technological tools and are vulnerable, and therefore need protection from cyberbullying while boys are portrayed as more aggressive and likely to be perpetrators of cyberbullying. Our results refer to the need to look beyond the masculine and feminine behaviours rooted in our society when dealing with the problem of cyberbullying. Therefore, it is important to teach boys strategies to help them cope with the specifics of the cyber environment in order to reduce the stress and likelihood of cyberbullying. At the same time, it is necessary to raise girls' awareness of the actual severity of cyberbullying in order to make them more cautious of the dangers of online communication.
- In the context of age, the two cyber-specific criteria – anonymity and publicity – were perceived differently by different age groups. In general, it seemed that these were more important to younger than older students. Knowing that younger students are more sensitive to cyber-specific criteria in terms of seriousness helps programme developers, parents and teachers to target the issue by teaching students strategies to help them cope with the specifics of the cyber environment and reduce the likelihood of cyberbullying. Older students should be reminded that actual seriousness and perceived seriousness are not the same thing, and therefore it is necessary to increase their awareness of the actual severity of public and anonymous cyberbullying in order to make them more cautious of the dangers of online communication, as suggested by Sticca and Perren (2013).

6.2.2 Types of cyberbullying

- The analysis of the focus group interviews revealed that students considered visual acts of cyberbullying and impersonation as more relevant when labelling the behaviour, and evaluated them as more serious compared to exclusion and written-verbal behaviour. The findings of the present study highlight the need to concurrently deal with online safety issues by acknowledging the positive and negative sides of online communication. In terms of impersonation, our results refer to the need to constantly remind students of the risks related to privacy. For instance, how should they manage privacy settings in social media accounts and what are the risks associated with passwords and geotagging. It should be emphasized that personal information should only be shared with family and real friends. In the context of pictures and videos, it is important to discuss which pictures and videos are appropriate for posting on the internet and which are not. Furthermore, the topic of how to take, use, share and comment on pictures and videos in a way that does not hurt anyone's feelings is also important.
- Exclusion remained rather in the background when labelling the behaviour and evaluating the seriousness of different types of cyberbullying behaviour. Our students seemed to perceive this type as more of a coping strategy against cyberbullying. As one implication for prevention and intervention, it is important to educate students, parents, and teachers that there is a difference between exclusion as a coping strategy and exclusion as a cyberbullying act. This aspect should be kept in mind when suggesting coping strategies for adolescents.
- There were no differences on how boys and girls labelled the scenarios as cyberbullying across the cyberbullying types. One difference was identified in terms of the severity evaluations. Boys evaluated written-verbal scenarios as more severe than girls did. In terms of age, impersonation and visual cyberbullying represented the cyberbullying construct better, with no differences between the two age groups, and were considered more serious than written-verbal behaviour and exclusion. In the context of severity, older students perceived impersonation as more severe compared to visual behaviour; the younger group evaluated visual behaviour as more serious compared to impersonation. Consequently, this result indicates that adolescents of different gender and ages may need different kinds of support and help when witnessing or dealing with the problem of cyberbullying.

6.3 Limitations of the study and suggestions for future research

The studies were not without limitations, and therefore the limitations and suggestions for future studies are as follows:

- Focus group interviews were conducted in autumn 2010. Data collection with questionnaires took place during the period between February and May 2011 in 2012. The cyberworld is constantly changing, and therefore there is a good chance that this data and the results are now outdated. However, it is also important to understand the dynamics of such a rapidly changing environment and in this respect our research findings may provide material for future research and interpreting future research.
- Another limitation deals with representativeness and generalizability. The schools that participated in the quantitative phase of our study were selected using the convenience sampling method. Even though we tried to ensure that schools of different sizes (e.g. schools in large and small towns, country schools) and types (basic schools and secondary schools) from different Estonian regions were included in the sample, the results cannot be generalized beyond the experiences of the participants in this sample.
- Data analysis methods reported in article II and article III were based on aggregated data. This approach allowed us to group individual scenarios together based on the criteria and type of behaviour and to analyse the large dataset in a more compact manner. In terms of gender and age, the analysis of 32 individual scenarios across four types of cyberbullying behaviour would have been more difficult to interpret. In terms of the five cyberbullying criteria in article II and III, the scenarios were aggregated together based on the presence of one criterion out of five, at the same time, the other four criteria varied. Therefore, the limitations associated with data aggregation need to be acknowledged. We cannot be sure that aggregating the data did not result in the loss of important information that would help to further interpret student perceptions of cyberbullying. Although, the results of our study also showed that the coexistence of criteria has an impact on how cyberbullying is perceived, the topic of the coexistence of the criteria still needs further investigation in future studies.

Based on her experience, the author of this thesis also presents some methodological recommendations for further research:

- The scenarios were divided into four versions of the questionnaire and thereby each student evaluated 32 scenarios in their questionnaire, which represented equally the four type of cyberbullying behaviour. Although the approach used in Estonia was an improvement on the original method planned in Working group 1 for the COST project, where one student evaluated only 16 scenarios, we still did not get a complete set of scenarios across one type of cyberbullying behaviour from one participant. Even though, the purpose was to facilitate the

student response process, the randomized administration of the scenarios limited the possibilities for data analysis and may also affect the generalizability of the results. Therefore, we suggest considering administering the questionnaire in two sessions to get a complete set of data across one cyberbullying type.

- During the piloting we realized that it can be difficult for students to differentiate between a large number of relatively similar scenarios, and therefore we took a number of steps that future researchers might consider. In Estonia, the scenarios used in focus group interviews were printed onto A4 paper to facilitate the student understanding of the differences between the scenarios and simplify the discussion. In further studies it would be even better to use a data projector to display scenarios on the wall, because there are ten people in the focus group and this would give all participants more equal access to the scenarios and thus facilitate the discussion.
- In the context of the questionnaire, the "leading case" approach originated from the author and her supervisor Piret Luik, and was used to facilitate student understanding of the different scenarios where the difference could depend on minor details. Based on our experience we can say that this approach fulfilled its purpose. The approach was also used in our recent study (Palladino et al., 2017).
- In the focus group interviews and questionnaire, students were put in the role of bystanders. It would be interesting to know whether the perspective of the victim or the bully would have an effect on the results. Furthermore, we did not examine the students' own experiences and involvement in cyberbullying and whether this has an effect on how cyberbullying is perceived across the criteria and types of cyberbullying. Further research is required in order to obtain the perspectives of bullies and victims, since it may contribute to our understanding of the cyberbullying construct.
- As a result of new technological advances, forms of cyberbullying are changing rapidly (Smith, 2016b) and in this light, the types of cyberbullying behaviour investigated in this study cannot be considered static and should be reviewed if necessary.
- Since children are accessing technology at younger ages, there may be a need to target the topic with younger age groups than we did (age groups 12–13 and 15–16).

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APPENDICES

Appendix I: Presence (Y) and absence (N) of the cyberbullying criteria in the 32 scenarios

Scenario	Intention	Repetition	An imbalance of power	Public (PUB)/ private (PRI)	Anonymity
1	N	N	N	PRI	N
2	N	N	Y	PRI	N
3	Y	N	Y	PRI	N
4	N	Y	Y	PRI	N
5	Y	Y	Y	PRI	N
6	Y	N	N	PRI	N
7	N	Y	N	PRI	N
8	Y	Y	N	PRI	N
9	N	N	N	PUB	N
10	N	N	Y	PUB	N
11	Y	N	Y	PUB	N
12	N	Y	Y	PUB	N
13	Y	Y	Y	PUB	N
14	Y	N	N	PUB	N
15	N	Y	N	PUB	N
16	Y	Y	N	PUB	N
17	N	N	N	PUB	Y
18	N	N	Y	PUB	Y
19	Y	N	Y	PUB	Y
20	N	Y	Y	PUB	Y
21	Y	Y	Y	PUB	Y
22	Y	N	N	PUB	Y
23	N	Y	N	PUB	Y
24	Y	Y	N	PUB	Y
25	N	N	N	PRI	Y
26	N	N	Y	PRI	Y
27	Y	N	Y	PRI	Y
28	N	Y	Y	PRI	Y
29	Y	Y	Y	PRI	Y
30	Y	N	N	PRI	Y
31	N	Y	N	PRI	Y
32	Y	Y	N	PRI	Y

SUMMARY IN ESTONIAN

Küberkiusamise tajumine Eesti õpilaste seas küberkiusamise kriteeriumite ja liikide kontekstis

Elame ajal, mil pidev veebis olemine on normaalse elu lahutamatu osa. EU Kids Online 2018. aasta uuringu tulemused näitasid, et 9–17-aastastest Eesti lastest 97% kasutab internetti iga päev ning peamiselt tehakse seda meelelahutuslikel eesmärkidel ja sotsiaalvõrgustikes suhtlemiseks (Sukk & Soo, 2018). Samad omadused, mis teevad kübermaailma laste ja noorukite jaoks köitvaks ja ahvatlevaks, on ühtlasi valu- ja stressiallikateks (Underwood & Ehrenreich, 2017). Informatsiooni- ja kommunikatsioonitehnoloogia arenguga on kiusamine levinud kübermaailma ning sellega seoses on kiusamine muutunud destruktiivsemaks, sest tavaelus kehtivad sotsiaalsed normid ei tööta kübermaailmas nii nagu peaks ning kiusajal on lihtsaid vahendeid kasutades võimalik neid eirata (Blumenfeld, 2013). Küberkiusamisel võivad olla tõsised tagajärjed, näiteks on seda seostatud vaimse tervise probleemide kõrgema esinemisriskiga (Blumenfeld, 2013).

Küberkiusamise mõistet kõrvutatakse sageli tavakiusamise mõistega. Tavakiusamise uurimisega on teadlased tegelenud nelikümmend aastat (Hymel & Swearer, 2015) ning selle mõiste defineerimisega hakkas 1970. aastatel esimesena tegelema Dan Olweus (Volk et al., 2014). Küberkiusamise defineerimisel on suurel määral toetutud Dan Olweuse kiusamise definitsioonile – kolmele kiusamiskäitumist defineerivale kriteeriumile (*tahtlikkus*, *korduvus* ja *tasakaalutus võimusuhetes*) on lisatud küberkeskkonna mõõde (Hinduja & Patchin, 2008; Smith et al., 2008). Kuna keskkond, kus küberkiusamine toimub, on oma olemuselt teistsugune (Chisholm & Day, 2013; Dooley et al., 2009; Kowalski et al., 2019; Langos, 2012; Menesini & Nocentini, 2009; Shariff, 2008; Slonje & Smith, 2008), siis on teadlased välja pakkunud küberspetsiifilised kriteeriumid (*avalikkus* ja *anonüümsus*), mis võiksid kübermaailmas toimuvat kiusamist täpsemalt kirjeldada (Menesini & Nocentini, 2009; Nocentini et al., 2010; Slonje & Smith, 2008; Smith et al., 2008; Sticca & Perren, 2013). Siiski puudub teadlaste vahel üksmeel, kuidas küberkiusamist nendest kriteeriumitest lähtudes defineerida (Berne et al., 2013; Kowalski et al., 2014; Tokunaga, 2010). Kuna definitsioon mõjutab suuresti seda, kuidas õpilased küsimustikule vastavad, võib tekkida olukord, kus küberkiusamise pealkirja all uuritakse erinevaid fenomene (Tokunaga, 2010). Mõõtmisvaliidsuse saavutamiseks on vaja nähtus selgelt defineerida, kuid praegu on veel ebaselge, mida olemasolevate küberkiusamise mõõtevahenditega uuritakse (Thomas et al., 2015; Tokunaga, 2010).

Nähtuse teaduslikul defineerimisel on oluline, et uurijad ja uuritavad mõistaks seda ühtemoodi (Thomas et al., 2015). Tavakiusamise (Smith et al., 2002; Vaillancourt et al., 2008) ja ka küberkiusamise uurimused (Moreno et al., 2018) on näidanud, et lapsed ja noored ei taju definitsioone nii, nagu teadlased neid esitlevad. Seega tekib küsimus valiidsusest ehk kas see, mis on uurijate jaoks (küber)kiusamine, on seda ka uuritavate silmis? Oluline on mõista ka seda, kuidas

lapsed ja noored tajuvad küberkiusamise tõsidust. See teadmine võib aidata luua küberkiusamise ennetamis- ja sekkumisprogramme ning tõsta kaaslaste, vanemate ja õpetajate teadlikkust juhtumitest, mille puhul on vaja sekkuda (Sticca & Perren, 2013). Varasemad uurimused on näidanud, et ka õpilaste sugu ja vanus (Ackers, 2012; Frisén et al., 2014; Sittichai & Smith, 2018; Slonje, Smith, & Frisén, 2017) mõjutavad seda, kuidas küberkiusamise olemust, tõsidust ja/või mõju tajutakse. Kõigile neile aspektidele on küberkiusamise kriteeriumite ja liikide valguses vähe tähelepanu pööratud ning sellest tulenevalt keskendutakse neile teemadele siinses doktoritöös.

Doktortöö eesmärk on välja selgitada, kuidas õpilased tajuvad küberkiusamist küberkiusamise kriteeriumite (*tahtlikkus*, *tasakaalutus võimusuhetes*, *korduvus*, *avalikkus*, *anonüümsus*) ja liikide (*kirjalik-verbaalne kiusamine*, *visuaalne kiusamine*, *tõrjumine*, *privaatsuse rikkumine*) kontekstis ning millised erinevused ilmnevad poiste ja tüdrukute ning erinevas vanuses õpilaste vahel. Töö eesmärgi saavutamiseks püstitati viis uurimisküsimust:

1. Mis termin kirjeldab õpilaste arvates kõige paremini stsenaariumites esitatud küberkiusamise situatsioone?
2. Millised küberkiusamise kriteeriumid on õpilaste jaoks relevantsed, kui neil tuleb otsustada, kas stsenaariumites kirjeldatud situatsioonide puhul on tegemist küberkiusamisega, ja kuidas hindavad õpilased nendest kriteeriumitest lähtuvalt stsenaariumite tõsidust?
3. Millised küberkiusamise liigid on õpilaste jaoks relevantsed, kui neil tuleb otsustada, kas stsenaariumites kirjeldatud situatsioonide puhul on tegemist küberkiusamisega, ja kuidas hindavad õpilased nendest liikidest lähtuvalt stsenaariumite tõsidust?
4. Millised on poiste ja tüdrukute vahelised erinevused küberkiusamise tajumisel küberkiusamise kriteeriumite ja liikide kontekstis?
5. Millised on vanusegruppide (12–13 eluaastat ja 15–16 eluaastat) vahelised erinevused küberkiusamise tajumisel küberkiusamise kriteeriumite ja liikide kontekstis?

Doktoritöös kasutati kombineeritud uurimismeetodit. Esimese sammuna tehti kaks fookusgrupi intervjuud, eraldi 6. klassi ja 9. klassi õpilastega. Mõlemas intervjuus osales kümme õpilast, kummaski rühmas võrdselt viis poissi ja viis tüdrukut. Fookusgrupi intervjuude läbiviimisel tugineti Euroopa projekti COST Action IS0801 raames valminud fookusgrupi intervjuude läbiviimise juhendile ja stsenaariumitele, mille doktoritöö autor ja tema juhendaja Piret Luik Eesti oludele sobivaks kohandasid. Intervjuude tegemisel kasutati kümmet stsenaariumit, mille puhul osalejatele kirjeldati ohvri ja kiusaja vahel toimunud situatsiooni. Täpsemalt anti ülevaade, kuidas kiusaja tegutses, millised olid tema kavatsused, kuidas ohver reageeris. Stsenaariumite koostamise aluseks oli viis küberkiusamise kriteeriumit (tahtlikkus, tasakaalutus võimusuhetes, korduvus, avalikkus, anonüümsus) ja neli küberkiusamise liiki (kirjalik-verbaalne, visuaalne, tõrjumine ja privaatsuse rikkumine). Esimesed kuus stsenaariumit kümnest käsitlesid viit küberkiusamise kriteeriumit, neist esimene stsenaarium oli kontrollstsenaarium.

Viimased neli stsenaariumit keskendusid küberkiusamise liikidele. Intervjuude käigus uuriti, kuidas õpilased tajuvad stsenaariumite vahelist erinevust. Neil paluti leida termin, mis stsenaariumites kirjeldatud olukordades juhtunut kõige paremini kirjeldaks. Lisaks küsiti, kui tõsised stsenaariumid õpilastele arvates on ja kuidas nad ise vastavas olukorras käituksid. Andmete analüüsimisel tugineti süsteemsetele meetoditele, mis on suunatud fookusgrupi intervjuude käigus kogutud andmete analüüsimiseks (Knodel, 1993; Krueger & Casey, 2009; Morgan, 1988; Morgan, 1997).

Fookusgrupi intervjuudele järgnes uuringu kvantitatiivne etapp, milles osales 336 õpilast vanuses 11 kuni 17 eluaastat. Valimi moodustamisel jälgiti, et poisid ja tüdrukud ning noorem ja vanem vanuserühm oleks valimis võrdselt esindatud. Ka selles etapis kasutati mõõtevahendina Euroopa projekti COST Action IS0801 raames valminud küsimustikke, mis kohandati Eesti oludele, ning sarnaselt fookusgruppidele kasutati selles etapis uurimisvahendina stsenaariumeid. Kõigepealt loodi 32 stsenaariumit, millest igaühes oli süsteemselt kombineeritud viis küberkiusamise kriteeriumit. Seejärel tõsteti stsenaariumid nelja küberkiusamise liigi konteksti. Kokku moodustati sel viisil 128 stsenaariumit. Kuna 128 stsenaariumi hindamine oleks ühe õpilase jaoks olnud liiga ajamahukas, jagati stsenaariumid nelja erineva küsimustiku versiooni vahel ära. Üks küsimustiku versioon koosnes seega 32 stsenaariumist, mis jagunesid võrdselt nelja küberkiusamise liigi vahel. Õpilane pidi iga stsenaariumi puhul hindama, kas tema arvates on tegemist kiusamisega või mitte (skaala "ei/jah"). Kui kirjeldatud situatsiooni peeti kiusamiseks, siis paluti ankeedi täitjal hinnata, kui tõsiseks ta seda ohvri jaoks peab ("mitte eriti tõsine", "küllaltki tõsine", "tõsine", "väga tõsine"). Kvantitatiivsete andmete analüüsimisel kasutati mitmemõõtmelist skaleerimist (*multidimensional scaling*, MDS) ning mitteparameetrilisi ja parameetrilisi võrdlusteste.

Esimesele uurimisküsimusele andsid vastuse fookusgrupi intervjuude käigus kogutud andmed. Fookusgrupi intervjuude analüüs näitas, et õpilased tajusid esitatud stsenaariumites kübermaailma konteksti ning mõned nende välja pakutud terminid seda ka peegeldasid: *internetis kiusamine*, *mobiiltelefonidega kiusamine, tekstisõnumitega kiusamine*. Samas ei peetud neid termineid sobivaks kõigi fookusgrupi intervjuude käigus esitatud stsenaariumite kirjeldamiseks, kuna stsenaariumites oli kirjeldatud situatsioone nii mobiiltelefonide kui ka interneti kontekstis. Fookusgrupi intervjuude käigus ei mainitud mitte kordagi terminit *küberkiusamine*. Konsensusele jõuti termini *kiusamine* puhul, mis õpilaste arvates kirjeldas kõige paremini stsenaariumites toimunut, ning seda terminit kasutati doktoritöö teises etapis kasutatud küsimustikes.

Teine uurimisküsimus puudutas küberkiusamise kriteeriumeid: tahtlikkus, tasakaalutus võimusuhetes, korduvus, avalikkus, anonüümsus. MDS-i tulemusena ilmnes kahemõõtmeline mudel. Selle mudeli põhjal võib öelda, et õpilaste jaoks olid stsenaariumite küberkiusamiseks nimetamisel olulised kaks kriteeriumit: tasakaalutus võimusuhetes ja anonüümsus. Stsenaariumeid, milles sisaldus võimusuhete tasakaalutuse kriteerium, hinnati tõsisemaks kui neid stsenaariumeid, kus see kriteerium puudus. Anonüümsuse kriteeriumi puhul

stsenaariumite tõsiduse hindamises erinevusi ei leitud. Ka fookusgrupi intervjuude tulemused näitasid, et õpilaste jaoks kõige olulisem kriteerium stsenaariumite küberkiusamiseks nimetamiseks ning nende tõsiduse hindamisel oli tasakaalutus võimusuhetes. Analüüs näitas, et teiste kriteeriumite (näiteks korduvus, anonüümsus) stsenaariumitele lisandumine suurendas ohvri ja kiusaja vahelist ebavõrdsust ning sellest tulenevalt hinnati stsenaariumeid ka tõsisemaks. Anonüümsuse kriteerium tekitas õpilastes rohkem segadust. Ühelt poolt ei saanud õpilased aru, miks on vaja selliseid tegusid üldse anonüümselt teha, ning leiti, et silmast silma öeldes saavutaks kiusaja oma eesmärgi tunduvalt paremini. Teiselt poolt mõisteti anonüümsusega kaasnevaid ohte. Anonüümsuse kriteerium oli ainuke, mille puhul vanemad õpilased leidsid, et abi saamiseks tuleks pöörduda õpetaja poole. Kõikide teiste kriteeriumite puhul leidsid nad, et saaksid ise hakkama ja välist abi poleks vaja. Avalikkuse kriteerium oli aga võimusuhete tasakaalutuse kriteeriumi kõrval teine, mis õpilaste seas fookusgrupi intervjuude käigus tugevat reaktsiooni tekitas. Selle kriteeriumi puhul tõstatasid õpilased teema, mis puudutas avalikkusega kaasnevat maine ja olemasolevate sõprussuhete kahjustamist.

Kolmas uurimisküsimus keskendus küberkiusamise liikidele: kirjalik-verbaalne küberkiusamine, visuaalne küberkiusamine, tõrjumine ja privaatsuse rikkumine. Fookusgrupi intervjuude analüüs näitas, et õpilased tajusid visuaalset küberkiusamist ja privaatsuse rikkumist rohkem küberkiusamisena kui kirjalik-verbaalset küberkiusamist ja tõrjumist. Visuaalset kiusamist ja privaatsuse rikkumist hinnati ühtlasi tõsisemaks kui kahte ülejäänud küberkiusamise liiki. Visuaalne küberkiusamine oli õpilaste hinnangul kõige veenvam. Vanemas vanusegrupis toodi välja, et "üks pilt räägib rohkem kui tuhat sõna". Privaatsuse rikkumist peeti kõige kahjustavamaks küberkiusamise liigiks. Õpilased mõistsid, kui laiaulatuslikku kahju võib selline tegevus endaga kaasa tuua. Kirjalik-verbaalse küberkiusamise puhul jäi õpilastele arusaamatuks, mis kasu selline tegevus kiusajale toob, sest tavaelus silmast silma öeldes saavutaks kiusaja oma eesmärgi tunduvalt paremini. Tõrjumist nähti aga pigem toimetulekustrateegiana. Tõstatati küsimus, mis võis stsenaariumis kirjeldatud sündmustele eelneda, ja oletati, et ehk on stsenaariumites ohvrina kirjeldatud tegelane hoopis ise kiusaja rollis olnud. Kõige sagedamini soovitatud reageerimisviis stsenaariumites kirjeldatud sündmustele oli mõlemas fookusgrupis ignoreerimine ja blokeerimine.

Neljas uurimisküsimus puudutas poiste ja tüdrukute vahelisi erinevusi küberkiusamise tajumisel. Andmete analüüs näitas, et esitatud stsenaariumite küberkiusamiseks nimetamisel ei olnud poiste ja tüdrukute vahel statistiliselt olulisi erinevusi . Erinevused ilmnesid aga selles, kui tõsiseks kirjeldatud olukordi peeti. Poisid hindasid tõsisemaks stsenaariumeid, milles sisaldus korduvuse, avalikkuse ja anonüümsuse kriteerium. Küberkiusamise liikide kontekstis hindasid poisid kirjalik-verbaalset küberkiusamist võrreldes tüdrukutega tõsisemaks.

Viies uurimisküsimus käsitles vanuselisi erinevusi küberkiusamise tajumisel. Vanusegruppide sisene võrdlus näitas, et mõlemas vanusegrupis peeti stsenaariumeid, milles sisaldus võimusuhete tasakaalutuse kriteerium, rohkem küberkiusamiseks kui ülejäänud nelja kriteeriumit sisaldanud stsenaariumeid. Mõlemas

grupis järgnes võimusuhete tasakaalutuse kriteeriumile kaks ülejäänud tavakiusamisele omast kriteeriumit – tahtlikkus ja korduvus. Kaks küberspetsiifilist kriteeriumit, avalikkus ja anonüümsus, jäid mõlemas vanusegrupis tagaplaanile. Tõsidushinnangute puhul oli vanusegruppide sisene muster sarnane sellega, kuidas stsenaariumeid kriteeriumitest lähtudes küberkiusamiseks nimetati. Mõlemas vanusegrupis hinnati kõige tõsisemaks stsenaariumeid, milles sisaldus võimusuhete tasakaalutuse kriteerium. Sellele kriteeriumile järgnesid stsenaariumid, mis sisaldasid tahtlikkuse või korduvuse kriteeriumit. Kõige vähem tõsiseks peeti mõlemas vanusegrupis stsenaariumeid, mis sisaldasid avalikkuse või anonüümsuse kriteeriumit. Nooremad õpilased hindasid avalikkuse kriteeriumit sisaldavaid stsenaariumeid tõsisemaks kui neid stsenaariumeid, milles sisaldus anonüümsuse kriteerium. Vanusegruppide vaheline võrdlus näitas, et nooremad õpilased (12–13 eluaastat) pidasid stsenaariumeid, milles sisaldus võimusuhete tasakaalutuse kriteerium, rohkem küberkiusamiseks kui vanemad õpilased (15–16 eluaastat). Tõsidushinnangute võrdlemisel selgus, et nooremad õpilased hindasid avalikku kiusamist tõsisemaks kui vanemad õpilased.

Küberkiusamise liikide puhul näitas vanusegruppide sisene andmeanalüüs, et nooremad õpilased nimetasid visuaalset küberkiusamist ja privaatsuse rikkumist sagedamini küberkiusamiseks kui ülejäänud kahte uuritud kiusamisliiki. Ka vanemas vanusegrupis kerkisid esile need kaks kiusamisliiki, kuid selles vanusegrupis ei leitud statistiliselt olulist erinevust privaatsuse rikkumise ja kirjalik-verbaalse küberkiusamise liigi vahel. Tõsidushinnangute analüüsimisel selgus, et vanemad õpilased hindasid visuaalset küberkiusamist tõsisemaks kui privaatsuse rikkumist. Nooremate õpilaste hinnangud olid vastupidised, nende jaoks oli privaatsuse rikkumine tõsisem kui visuaalne küberkiusamine. Vanusegruppide vaheline võrdlus näitas statistiliselt olulisi erinevusi vaid tõrjumise puhul. Nooremad õpilased pidasid tõrjumist märkimisväärselt rohkem küberkiusamiseks ning hindasid seda ka tõsisemaks. Ülejäänud kiusamise liikide puhul vanusegruppide vahel erinevusi ei ilmnenud.

Soovitusi edasisteks sammudeks tuleb uurimuse metoodiliste piirangute tõttu käsitleda ettevaatlikult ja kinnitada tulevastes uurimustes. Nii fookusgrupi intervjuude analüüs kui ka MDS näitasid, et kõige olulisem kriteerium küberkiusamise defineerimisel ja selle tõsiduse hindamisel oli tasakaalutus võimusuhetes. Soolises võrdluses kerkisid esile kaks ülejäänud tavakiusamise kriteeriumit, tahtlikkus ja korduvus. Küberspetsiifiliste kriteeriumite puhul ilmnes küsimustikega kogutud andmete puhul anonüümsuse olulisus, avalikkuse olulisust rõhutasid fookusgrupi intervjuude analüüsi tulemused. Seega võib uurimistulemuste põhjal öelda, et kiusamine on laiem mõiste, mille alla kuulub küberkiusamine, kuid küberkiusamisel on ühtlasi omad eripärad, millega tuleb arvestada. Siiski viitavad uurimustulemused sellele, et küberspetsiifilisi kriteeriumeid tuleks käsitleda pigem kiusamise keskkonda ehk kübermaailma rõhutavate faktoritena, mis annavad õpilastele selgema kujutluse sellest, mida mõõdetakse. Need kriteeriumid võiksid olla sõnastatud definitsiooni täpsustavate lisadena, nii et välistatud poleks ka need küberkiusamise juhtumid, mis pole anonüümsed või toimuvad privaatselt. Sooti ja vanuseti nimetati stsenaariumeid küberkiusamiseks üldjoontes

samamoodi, erinevused ilmnesid aga õpilaste tõsidushinnangutes. Poisid tajusid küberkiusamist mitmes aspektis tõsisemana kui tüdrukud, seda ka kahe küberspetsiifiliste kriteeriumite suhtes (avalikkus ja anonüümsus). Vanuselised erinevused ilmnesid tõsidushinnangutes ühe küberspetsiifilise kriteeriumi, avalikkuse puhul. Noorem vanusegrupp (12–13 eluaastat) tajus avalikkuse kriteeriumit sisaldavaid stsenaariumeid tõsisemalt kui vanem vanusegrupp (15–16 eluaastat). Küberkiusamise liikide puhul näitasid tulemused, et mõnda liiki tajuvad õpilased tõsisemalt (visuaalne küberkiusamine ja privaatsuse rikkumine) kui teisi (kirjalik-verbaalne kiusamine ja tõrjumine) ning seda ka sooti ja vanuseti. See võib olla märk sellest, et eri vanuses ja eri soost õpilased vajavad küberkeskkonnas toimetulekuks spetsiifilise suunitlusega toetust, et aidata neil toime tulla kübersuhtluse eripärade ja ohtudega. Oluline on rääkida lastega veebi postitatavatest piltidest ja videotest. Näiteks millised pildid ja videod sobivad postitamiseks ja millised mitte ning kuidas kommenteerida ja jagada neid nii, et keegi haiget ei saaks. Lisaks peab käsitlema privaatsusega seonduvaid ohte. Tõrjumise puhul on tähtis rõhutada, mis vahe on tõrjumisel kui toimetulekustrateegial ja tõrjumisel kui kiusamise liigil.

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PUBLICATIONS

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Publications:

Luik, P. & Naruskov, K. (2018). *Student's Perceptions of Cyberbullying in the Context of Cyberbullying Criteria and Types: The Role of Age*. Paper presented at the 7th International conference on Learning Technology for Education Challenges, Žilina, Slovakia. Springer, Cham. https://doi.org//10.1007/978-3-319-95522-3_3

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Teadustegevus:
Kiusamine ja küberkiusamine

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