

HEDDA LIPPUS-METSAOTS

Interpersonal violence in Estonia:  
prevalence, impact on health and  
health behaviour





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Department of Obstetrics and Gynaecology, Institute of Clinical Medicine,  
University of Tartu, Tartu, Estonia

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Supervisors: Professor Helle Karro, MD, PhD  
Department of Obstetrics and Gynaecology, Institute of Clinical  
Medicine, University of Tartu, Tartu, Estonia  
Women's Clinic of Tartu University Hospital, Tartu, Estonia

Made Laanpere, MD, PhD  
Department of Obstetrics and Gynaecology, Institute of Clinical  
Medicine, University of Tartu, Tartu, Estonia  
Women's Clinic of Tartu University Hospital, Tartu, Estonia

Reviewers: Associate Professor Liina Haring, MD, PhD  
Department of Psychiatry, Institute of Clinical Medicine,  
University of Tartu, Tartu, Estonia  
Psychiatry Clinic of Tartu University Hospital, Tartu, Estonia

Associate Professor Kersti Pärna, MD, MPH, PhD  
Institute of Family Medicine and Public Health, University of  
Tartu, Tartu, Estonia

Opponent: Associate professor Lena Henriksen, RN, RM, MPH, PhD  
Department of Nursing and Health Promotion, Oslo  
Metropolitan University, Oslo, Norway  
Division of General Gynaecology and Obstetrics, Oslo  
University Hospital, Oslo, Norway

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## LIST OF ORIGINAL PUBLICATIONS

The thesis is based on the following publications:

- I Lippus H, Laanpere M, Part K, Ringmets, I, Karro H. What do we know about the impact of sexual violence on health and health behaviour of women in Estonia? *BMC Public Health*. 2020;20:1–8.
- II Lippus H, Laanpere M, Part K, Ringmets I, Karro H. Polyvictimization and the associations between poor self-perceived health, dissatisfaction with life, and sexual dysfunction among women in Estonia. *J Interpers Violence*. 2018:1–19.
- III Lippus H, Soo K, Laanpere M, Yount K M, Part K, Ringmets I, Ainsaar M, Karro H. The prevalence and patterns of exposure to interpersonal violence among men and women in Estonia. *PLoS One*. 2020;15:1–14.

Contribution of Hedda Lippus-Metsaots to the original publications:

Participating in the Estonian Women’s Health Survey design, proposing the research questions, participating in the data analysis and interpretation of data, writing the first drafts of the manuscripts and carrying out final revisions before the publication.

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## ABBREVIATIONS

ACEs	adverse childhood experiences
EMS	Survey of Estonian men’s attitude and behaviour: health, education, employment, migration and family formation
EMU	Eesti meeste hoiakute ja käitumise uuring: tervis, haridus, tööhõive, ränne ja pereloom
ESTRE	Eesti naiste tervis 2014: seksuaal- ja reproduktiivtervis, tervisekäitumine, hoiakud ja tervishoiuteenuste kasutamine”
EU	European Union
EV	emotional violence
EWHS	Estonian women’s health survey 2014: sexual and reproductive health, health behaviour, attitudes and use of healthcare services
FRA	European Union Agency for Fundamental Rights
GDP	gross domestic product
HPA	hypothalamic-pituitary-adrenal axis
IPV	intimate partner violence
IV	interpersonal violence
NATO	North Atlantic Treaty Organization
NISVS	National Intimate Partner and Sexual Violence Survey
NorAQ	Norvold Abuse Questionnaire
OECD	Organisation for Economic Co-operation and Development
PhV	physical violence
PTSD	post-traumatic stress disorder
PV	polyvictimization
PVA	polyvictimization in adulthood
STI	sexually transmitted infection
SV	sexual violence
U.S.	United States
WHO	World Health Organization



# 1. INTRODUCTION

Violence and aggression have historically played a major part in establishing the power structures and in the development of various aspects of the society. It is a cross-cultural phenomenon, but the manifestations are shaped by the values and circumstances of particular cultures (Renzetti, Edleson, & Bergen, 2010). A central theme in the theorization of violence is intimately connected with power (Ray, 2011). Violence does not arise in a vacuum, but occurs in repeated and patterned way, often within entrenched social relations (Ray, 2011). The term violence is very wide and encompasses for example wars, terrorism, ethnic cleansing, and human trafficking.

This work focuses more specifically on interpersonal violence (IV), which according to the World Health Organization (WHO) definition refers to violence between individuals, and is subdivided into family and intimate partner violence (IPV) and community violence (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). In this study, the term IV encompasses both of these subtypes.

Over time, common understanding about the acceptability of IV, both socially and legally, has been changing. Gradually different forms of IV have gained public attention and become topics of academic interest. With feminist movements in the 1970s, violence against women, a topic so far largely hidden and ignored by the public, emerged as a social issue and gained the interest of researchers (Renzetti et al., 2010). Since then, research on IV has been steadily increasing and the overall understanding of this phenomenon has vastly improved. In the 1990s IV was recognized as a major public health issue and a human rights violation (Krug et al., 2002; Niemi, Peroni, & Stoyanova, 2020).

Although both men and women can be victims and perpetrators of violence, the majority of the research has focused on violence against women for valid reasons. Women are overwhelmingly victims of the most severe form of IPV, labelled by Johnson “intimate terrorism”, they are more often victims of sexual violence (SV) and suffer from more severe health consequences of violence (Houry et al., 2008; Johnson, 2011). The prevalence of IV is affected by social and gender norms, which are associated with the permissibility of violence. In societies, where gender inequality is more pervasive, violence against women is more common and less frequently recognized (Krug et al., 2002). However, this does not mean, that it does not have negative health consequences, due to the stigma attached to being exposed to violence and less options to seek help, the consequences can be even more severe and long-lasting (Krug et al., 2002).

Violence has a variety of health consequences, which can happen immediately after the exposure, be chronic or fatal (Garcia-Moreno, Guedes, & Knerr, 2012). When immediate consequences are usually more easily connected to the violent act, long-term or chronic impact on health can take more hidden forms and appear much later. For example, exposure to abuse or household dysfunction in childhood, termed adverse childhood events (ACEs), has been associated with leading causes of death in adulthood (Felitti et al., 1998). Knowledge about the wide array

of possible health consequences has immensely improved in a few decades, however, there is still much we do not know about the health impact of violence, especially cumulative effects of different forms of violence, and the mechanisms behind it.

As discussed earlier, different forms of violence have become topics of public interest at different times. Due to that, most of the research concerning violence has been focusing on specific forms of violence, such as SV, IPV and violence in childhood. More recently, the associations between different forms of violence have been recognized and a more comprehensive and person-centred approach in violence research has been emerging. Exposure to different forms of violence share many common risk factors and also, some of the risk factors are the same for the perpetration of violence (Hamby & Grych, 2013). Focusing on this kind of interconnectedness has been called “the second wave of violence research” by Hamby (Hamby & Grych, 2013).

Due to the fact that violence is so widespread and exists in all cultures, it carries the risk of being seen as a regrettable but inevitable part of life. Fortunately, with the increase in research explaining this phenomenon and prevention strategies stemming from research it has been universally accepted that this is not the case. Therefore, it is of high value to have research carried out in different settings with varying cultural and historical backgrounds. Providing evidence and based on that creating culturally specific and appropriate interventions, including increasing the knowledge and changing gender stereotypes among the general population, is the key for eliminating IV. Although research looking at the prevalence and health consequences of violence has been emerging, knowledge about IV in Estonia is limited in comparison with other European and North American countries.

This research had three main aims, firstly contribute to filling in the gap of knowledge regarding the prevalence of IV among men and women in Estonia. Secondly, understanding better what factors are associated with increased risk for exposure. And thirdly, analysing the health consequences of IV. These aims were set in order to understand better the needs for services among victims of IV and to plan and develop interventions for primary and secondary prevention of IV.

## **2. REVIEW OF THE LITERATURE**

### **2.1 Violence**

#### **2.1.1. Definition and typology of violence**

Violence has been defined in many ways in different contexts and no universally accepted definition currently exists. One way of defining violence is like it is done in the criminal law. However, this is considered to be a narrow definition and results in very low prevalence estimates, reflecting only the most serious cases. In research, to uncover a broader array of violent experiences, which can be harmful to a person, broader definitions are used (Renzetti et al., 2010).

WHO defines violence as follows: “The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation.” (World Health Organization, 1996). The intentionality of the act is a key component, which distinguishes violence from accidents and unintended harm. By intentionality it is meant that there has to be a wish to use violence, not necessarily to cause harm, the intended consequence may be different from the actual outcome of the act (Krug et al., 2002). Due to cultural and historical reasons in some cases, the perpetrator does not see his/her actions as violent (e.g. physical punishment of children, SV against legal partner). Still it is violence by this definition, as it results or has a high likelihood of resulting in negative health consequences (Krug et al., 2002). Some have criticized the inclusion of the word “intentional”, as it gives the power of defining the act to the perpetrator as only he/she knows the intention behind the action (Simmons, 2015). However, it would be difficult to omit the word from the definition as it plays an important role in distinguishing benevolent acts from malevolent.

In the following paragraphs, the typology of violence will be discussed. However, it is important to keep in mind, that this kind of categorization of violence is done for the purposes of research and although it is done according to the best current knowledge, it cannot reflect all the complexities and nuances of violence in real life.

Most widely used in the field of public health and comprehensive categorization of violence was proposed in the “World report on violence and health” in 2002 (Krug et al., 2002). According to this, violence can be divided into three broad categories (Figure 1):

- Self-directed violence
- Interpersonal violence
- Collective violence

Violence can be categorized also according to the nature of violent acts (Figure 1):

- Emotional violence (EV)/ psychological violence
- Physical violence (PhV)
- Sexual violence (SV)
- Deprivation/neglect

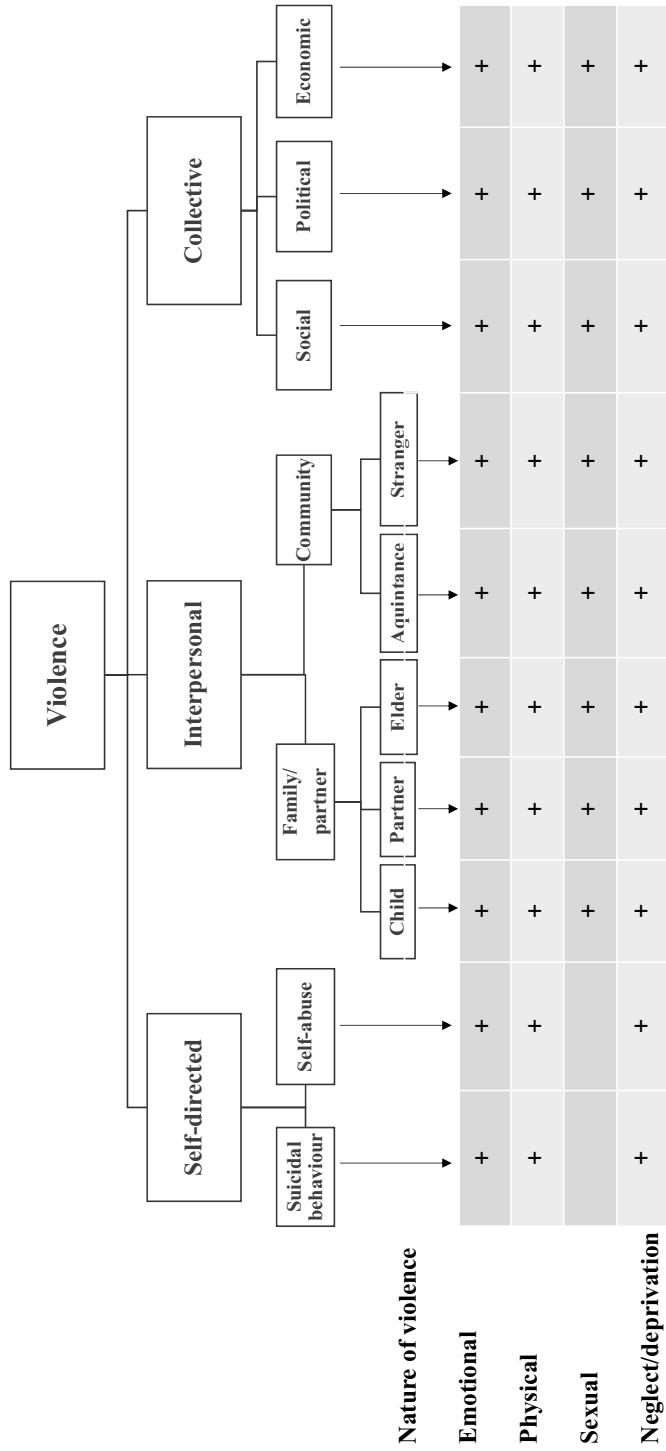


Figure 1. Typology of violence (adapted from Krug et al., 2002).

The exact definitions of what constitutes as EV, PhV or SV or neglect depends on the ways how and what questionnaires are used. More in-depth discussion regarding the violence measuring instrument used in this study can be found under methods.

### **2.1.2. Definition and forms of interpersonal violence**

The present work focuses more closely on IV, which refers to violence between individuals and is subdivided into a) family and IPV, b) community violence (Krug et al., 2002). Throughout this dissertation, the term IV encompasses both of these subtypes.

Family and IPV can be categorized according to the stage of life when it occurred (Krug et al., 2002):

- childhood
- adolescence
- adulthood
- violence among elderly

IV affects both men and women. However, there is an abundance of research showing that the motivations for carrying out violence, the severity and health consequences differ by gender (Fulu et al., 2013; World Health Organization, London School of Hygiene & Tropical Medicine, & South African Medical Research Council, 2013). For that reason, this research focuses mostly on violence against women but recognizes the necessity of understanding the burden of violence on the population level.

### **2.1.3. Polyvictimization**

For decades, research on violence has mostly focused narrowly on one type of violence during a certain life period, which has caused disciplinary silos in violence research (Hamby & Grych, 2013). The reason for that is mainly historical, as different forms of violence have come to public and scientific attention at different times (Hamby & Grych, 2013). However, there is a growing amount of evidence showing that among those exposed to violence, multiple exposures to either different forms of violence, violence during different developmental periods or by different perpetrators is more common and has more serious health consequences than it was previously known (Finkelhor, Ormrod, & Turner, 2007a; Hamby & Grych, 2013; Scott-Storey, 2011; Simmons, 2015). The term polyvictimization (PV) first emerged more than ten years ago in the research carried out by Finkelhor and colleagues in the U.S. (United States) among children (Finkelhor et al., 2007a). They drew attention to the fact that much of the research so far had focused on one form of violence and failed to obtain complete victimiza-

tion profiles (Finkelhor et al., 2007a). In addition to that, they demonstrated that when PV was taken into account, it reduced or sometimes even eliminated the association between most other individual victimizations and symptomatology scores (Finkelhor, Ormrod, & Turner, 2007b). They also showed that exposure to one form of violence is associated with doubling or tripling the risk of any other form of violence (Finkelhor, Turner, Ormrod, & Hamby, 2009). Focusing very narrowly on one form of violence hampers the development of more comprehensive models about the impact and risk factors of violence. This understanding has led to the emergence of studies exploring the intersections of different forms of violence and has been referred to as the second wave of violence scholarship (Hamby & Grych, 2013).

Different terminology has been used to describe exposure to multiple forms of violence, for example, accumulated trauma, polytraumatization, PV (Scott-Storey, 2011). Throughout this research it will be referred to as PV, prefix “poly” refers to the exposure of different forms of violence, in contrast, revictimization refers to repeated experiencing of one form of violence (Hamby & Grych, 2013).

The majority of the research on PV has been carried out among children and youth, more recently studies looking at PV among adults has been emerging (Burns, Lagdon, Boyda, & Armour, 2016; Hamby & Grych, 2013; Simmons, 2015), but there are still many gaps in the field on PV among adults.

#### **2.1.4. Gender in violence research**

Both men and women can be victims and perpetrators of violence, however the majority of the research on the prevalence of IV has focused on violence against women and on men’s perpetration for very valid reasons (Houry et al., 2008). The question of gender symmetry or asymmetry, mostly in the context of IPV, has been heavily debated in the academic community for decades (Dobash & Dobash, 2004; Hamby, 2014, 2017; M. P. Johnson, 2011; Saunders, 2002; Winstok, 2017). Gender symmetry means that men and women are equally likely to be victims and perpetrators of violence. The prevalence across gender depends on the questionnaire and sampling methods used (M. P. Johnson, 2011; Saunders, 2002). Mainly studies where behavioural checklists (for example the Revised Conflict Tactics Scale) are used, have shown gender symmetry, surveys using different methodology show that men perpetrate more violence (Hamby, 2014). Research suggests that forms of violence, the motivations and health consequences differ by gender (Flood, 2006; Houry et al., 2008; Saunders, 2002; Smith et al., 2017). As the discussion regarding the prevalence and differences of IV among men and women has mainly focused on IPV, it is important to understand that IPV has different subtypes and the perpetration and being victim of these subtypes are not equally distributed among men and women. According to Johnson, there are three main subtypes of IPV (M. P. Johnson, 2011). Firstly, violent resistance, when victims of violence respond to it with violence. Secondly, situational couple violence, which occurs when couple conflicts escalate and become violent.

Situational couple violence is the most common type of IPV. And lastly, there is intimate terrorism, which is the most severe type of IPV. It is characterized by coercive control and it involves the combination of EV, PhV and/or SV, economic control, the abuse of children, threats and intimidation and constant monitoring (in person or using digital devices). The criminal justice system and battered women's shelters predominantly see women who are victims of intimate terrorism. Even when the debate about the prevalence among men and women continues, it is generally agreed, that women suffer more severe consequences of IPV (Dobash & Dobash, 2004; Houry et al., 2008; Smith et al., 2017). It has been hypothesized that as women are more often exposed to violence perpetrated by a person close to them, in comparison with men, it affects their self-esteem and trust more seriously (Danielsson, Blom, Nilsson, Heimer, & Högberg, 2009). Women need more often medical interventions due to severe physical consequences of IPV and are more likely to be killed by their current or previous intimate partner (Smith et al., 2017; UNODC, 2018). Recently an eight-year review of IPV-related fractures in the U.S. was carried out, where women accounted for 83% and nearly half of them had sustained fractures to the face (Porter et al., 2019). Women are most often exposed to violence perpetrated by their husband or an intimate male partner, in contrast, men are more likely attacked by a stranger or acquaintance (Krug et al., 2002). It remains out of the scope of the present study, but it should be also noted, that most of the research has been carried out among heterosexual cisgender samples, but IPV and other forms of IV remain a pervasive problem also among the lesbian, gay, bisexual, transgender and queer community (Balsam, Rothblum, & Beauchaine, 2005; Rothman, Exner, & Baughman, 2011; World Health Organization and London School of Hygiene and Tropical Medicine, 2010).

When looking at IV more widely, men are more often victims of homicide and some studies show that men are more exposed to PhV (UNODC, 2018; Lövestad & Krantz, 2012; Mock, Nugent, Kobusingye, & Smith, 2017). The prevalence of SV however, is higher among women both in childhood and adulthood (Lövestad & Krantz, 2012; Stoltenborgh, van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011). Below more detailed discussion regarding the prevalence of IV and mortality rates can be found.

### **2.1.5. Interpersonal violence and human rights**

Integrating public health and human rights approaches enables us to grasp better the multidimensionality of IV and also plays an important role in creating effective violence prevention strategies (Phinney & de Hovre, 2003). Some forms of IV, such as murder, have been historically regulated by laws. However, until relatively recently, many forms of IV, particularly IPV, have been considered to be a private matter. In 1992 the Committee on the Elimination of Discrimination against Women and in 1993 the United Nations General Assembly framed violence against women as the result of discrimination and structural inequality (Council of Europe, 2011). Integral role was played by the World Conference on

Human Rights convened in Vienna in 1993, the International Conference on Population and Development held in Cairo in 1994, and the Fourth World Conference on Women in Beijing in 1995, which further elaborated on the topic and articulated main goals for achieving the elimination of violence (Carrillo, 2002). Since then, attention has been drawn to violence against women as a human rights issue that warrants legal and political recognition at the highest level, and that governments have an obligation to safeguard victims (European Union Agency for Fundamental Rights, 2014). Although this work is mainly focused on the public health approach, it has been previously correctly pointed out that public health recommendations alone may remain too weak for preventing IV (Gruskin, 2003; Phinney & de Hovre, 2003). Recognizing that violence is a human rights issue has drawn attention to governments' legal obligations to address violence in terms of both its prevention and its effects (Gruskin, 2003). Human rights law helps to challenge the widespread belief that violence is an inseparable part of being human (Phinney & de Hovre, 2003).

However, only a few international documents or decisions have so far been legally binding (Niemi et al., 2020). In Europe, the Istanbul Convention is the first and core instrument that sets clear and binding obligations on the States that ratify the Convention (Council of Europe, 2011). The main goals of the Convention are the elimination of violence and discrimination against women, empowering women, addressing gender inequality, cultural patterns and gender stereotypes that facilitate violence against women (Niemi et al., 2020). The Convention is based on four pillars: prevention, protection, prosecution and coordinated policies (Council of Europe, 2011). The Convention was adopted by the Committee of Ministers and opened for signature in Istanbul on 11 May 2011. In Estonia, it caused some political opposition, but it was still ratified in 2017. However, in several Central- and Eastern-European Countries, characterized also by a lower gender equality index, it has caused strong opposition and has remained unratified (Council of Europe, 2021; European Institute for Gender Equality, 2020).

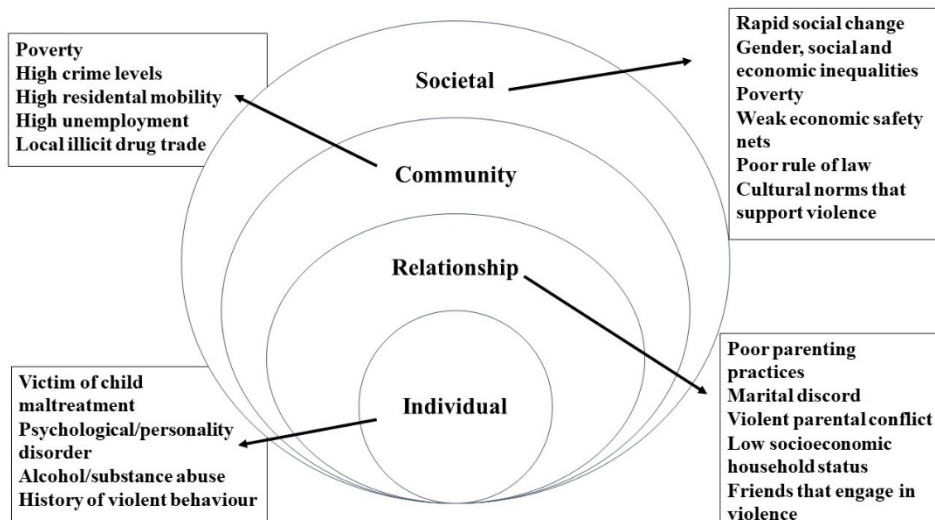
Violent acts violate human rights and at the same time arise from inadequate fulfilment of human rights (Phinney & de Hovre, 2003). One of the examples of inadequate fulfilment of human rights associated with increased levels of IV is the right to equality and non-discrimination, one of the pillars of human rights. In countries and regions where gender inequality is pervasive, violence against women remains more common, showing that these regions have not fulfilled their obligation to protect the people living within their borders (Phinney & de Hovre, 2003). Some further examples are right for education and an adequate standard of living, both of which (low education and poverty) are known to be risk factors for IV (Krug et al., 2002).

At the same time IV is a severe violation of various human rights: right for life, freedom, security, dignity, non-discrimination, not to be tortured or treated in a cruel, inhuman or degrading way (European Union Agency for Fundamental Rights, 2014; Phinney & de Hovre, 2003). The threat of violence or fear for (re)experiencing is a barrier to the realization of the best possible quality of life and sustainable human development.



## 2.2. Risk factors of interpersonal violence

Violence is a result of the balance between factors enabling the occurrence and factors preventing it (Mock et al., 2017). To understand how these factors are connected to each other, the socio-ecological model, depicted in Figure 2, has been widely used (Heise, 1998). It illustrates that IV does not occur in a socio-cultural vacuum and no single factor is responsible for it. IV is a result of a complicated interplay between four nested levels on socio-ecological model: individual (ontogenic), relationship/family (microsystem), community (exosystem) and societal (macrosystem)(Heise, 1998; Krug et al., 2002) (Figure 2).



**Figure 2.** The socio-ecological model of violence (adapted from World Health Organization 2021).

For creating effective prevention programs, understanding the factors associated with IV is a key component. Many forms of IV share common risk factors and also, they share common risk factors with perpetrating violence (Hamby & Grych, 2013). Some of the factors increasing the risk for both perpetration and victimization are for example exposure to violence in childhood and substance abuse (Mock et al., 2017). Awareness of the risk factors provides the opportunity to develop interventions in areas in which they would be the most effective. For example, supporting the development of safe, stable, and nurturing relationships between children and their caregivers can prevent child maltreatment, reduce childhood aggression, there is evidence suggesting it also reduces violence in adolescence and early adulthood and theoretically decreases IPV and self-directed violence in later life (Mock et al., 2017).

### **2.2.1. Individual level**

Talking about individual risk factors is sometimes interpreted as victim-blaming, however identifying personal characteristics that increase the risk is not the same as blaming somebody for being victimized (Hamby & Grych, 2013).

On an individual level one of the strongest predictors for experiencing violence is previous exposure to violence or witnessing violence (Hamby & Grych, 2013; World Health Organization and London School of Hygiene and Tropical Medicine, 2010). Most often the social learning theory is used to explain why violence begets violence (Renzetti et al., 2010). The main argument of the social learning theory is that violence and aggression are not inherent properties of the individual, but they are learned behaviours (Renzetti et al., 2010). Other commonly recognized risk factors are young age, low educational achievement, lack of non-violent social problem-solving skills, poor behavioural control or impulsiveness, mental health problems and substance abuse (Larsen, 2015; Wilkins, Tsao, Hertz, Davis, & Klevens, 2014; World Health Organization and London School of Hygiene and Tropical Medicine, 2010). Some factors, like pregnancy, can be at the same time consequence of violence and a risk factor for violence (J. Campbell, 2002). The term “contraceptive coercion” was coined to describe a specific expression of violence when violent partner prohibits the use of contraceptives or sabotages the use in any other way, which may result in unintended pregnancy (Miller et al., 2014). Pregnancy in turn has been associated with increased risk for IPV (Miller et al., 2014; World Health Organization and London School of Hygiene and Tropical Medicine, 2010; Yakubovich et al., 2018).

### **2.2.2. Relationship level**

The relationship level or microsystem focuses on direct interactions between a person and members of their closer social circle such as families, friends, and peers. Some forms of violence are more dependent on the quality of personal relationships. Especially IPV and violence against children, which are usually hidden from people outside of the family/relationship. Children are the most vulnerable, as they usually have no option to leave the violent situation and if they have grown up in a violent environment this may be for them the only known normality (Krug et al., 2002). But also in cases of IPV, especially intimate terrorism, where victims do not see a way out, as the perpetrator has usually gained significant economic and social control over the victim (M. P. Johnson, 2011).

On relationship level lack of social support, poor parent-child relationships, family conflict, economic stress and having peers who engage in illegal behaviour have been identified as risk factors for IV (Wilkins et al., 2014; World Health Organization and London School of Hygiene and Tropical Medicine, 2010). Characteristics of families with increased risk for IV are family breakdown, disorganization and dysfunction, unsupportive parents and patriarchal structure

(Grauerholz, 2000). In a systematic review, perceived parental care was identified as a protective factor for revictimization after childhood sexual abuse (Scoglio, Kraus, Saczynski, Jooma, & Molnar, 2021). The attitude of people in the closer social circle towards violence, affects the way how violent acts are seen and tolerated (Krug et al., 2002).

### **2.2.3. Community level**

Community level focuses on the risk factors in neighbourhoods, schools, and workplaces, but also organizations and social systems (e.g., legal and medical) (R. Campbell, Dworkin, & Cabral, 2009; Krug et al., 2002). On this level lack of neighbourhood support and cohesion, weak sense of belonging to the community, high levels of mobility, high population density and poor social connections have been identified as risk factors for IV (Du Mont, Hill, Kosa, & Johnson, 2020; Krug et al., 2002; Mock et al., 2017). Additionally, high poverty and unemployment levels in the community, high drug and alcohol use or trafficking of illegal drugs, high alcohol outlet density increase the risk for IV (Mock et al., 2017).

### **2.2.4. Societal level**

The outermost circle presents the societal level, which is the broadest level affecting all the inner ones. It includes societal norms, expectations, and beliefs that form the broader social environment (R. Campbell et al., 2009). Is violence seen as an acceptable way to resolve conflicts, is physical punishment of children seen as the norm, are men and women seen as equal members of the society, all of these attitudes frame how violence is seen by the society. Restrictive gender norms and gender inequality impact even the most private aspects of everyday lives, such as how intramarital sexual relationships are seen. In many cultures, it is widespread understanding that after marriage wife should be sexually available to her husband virtually without limit (Krug et al., 2002). It has also been shown that in the societies with lower levels of gender equality, the most damaging form of IPV, intimate terrorism, is more common (Nevala, 2017). If it is common belief, that this is the norm, then victims often do not see the act as violence, however, it still has a negative health impact (Krug et al., 2002). Societal level also includes how perpetrating violence is regulated and punished by the law. If there are no consequences for committing violent acts, it gives a message to the society that violence is acceptable and perpetrators get the feeling of impunity which increases the risk for repeating the violent acts (Fulu et al., 2013)

In addition to forming the environment where violence can take place, larger societal norms also form the response to violence (R. Campbell et al., 2009). These norms impact the quality of services provided to victims, for example, are they helped or meet hostile environments which can have further negative impact on health (R. Campbell et al., 2009).

### **2.3. Measurement methodologies of interpersonal violence**

There are multiple issues associated with measuring the prevalence of IV. Official crime statistics show only a small part of IV (European Union Agency for Fundamental Rights, 2014; Renzetti et al., 2010). They reflect more the quality of official data collection mechanisms and the culture of reporting IV than about the ‘real’ extent of violence (European Union Agency for Fundamental Rights, 2014).

Along with increased attention to different forms of violence, the methodology for researching violence has improved over the last decades (Renzetti et al., 2010). The ways how questions are asked is strongly associated with the levels of disclosure (Fisher, 2009). Different methodologies used and willingness to disclose violent experiences or to recognize them can largely vary and affect the comparability of the results (Renzetti et al., 2010). The first questionnaire for measuring violence against women was developed by Straus in 1979, called the Conflict Tactics Scale, which measured physical aggression among couples (Straus, 1979). In the 1980s Koss with colleagues developed a questionnaire for measuring rape and other forms of coercion using behaviourally specific items and Kilpatrick advanced the measurement of rape using explicitly worded questions (Renzetti et al., 2010). It is generally agreed, that behaviourally specific questions give more accurate estimates of the prevalence of this phenomenon on a population level (Fisher, 2009). Asking from the respondent direct questions about specific acts of violence over a well-defined period of time, rather than using more scientific terminology such as “domestic violence” or “exposed to sexual abuse”, is currently seen as the “gold standard” method for measuring violence (World Health Organization et al., 2013). This is important, because what is perceived as violence, rather than just an unpleasant part of normality, depends largely on cultural background and societal norms. But even when not considered to be violence by the victim, these events can still have negative health impact. Using precise descriptions of violent events can reduce reporting bias and improve the comparability of results across different settings. In the surveys this thesis is based on, the NorVold Abuse Questionnaire (NorAQ) was used. NorAQ has detailed descriptions about each form of violence (Swahnberg & Wijma, 2003), further discussion about the NorAQ can be found under the subheading “Violence measuring instrument”. However, even with behaviourally specific questions, there are various factors, which can influence the disclosure of exposure to violence. For example, in a multi-country study conducted in Asia and the Pacific, men reported higher levels of perpetrating violence, than women reported being exposed to. The authors of this study hypothesized that this is associated with the normalization of violence against women in the society, and also that there is less shame and stigma for men to admit perpetrating violence than for women to admit experiencing it. Men are not afraid of either legal or social repercussions and therefore women’s fear of further violence is likely greater than men’s (Fulu et al., 2013).

Due to the sensitivity of the questions and the possibility that participating in research may lead to an escalation of violence, ethical guidelines for research and more specifically violence research must always be followed. In 2001 WHO published Ethical and Safety Recommendations for Research on Domestic Violence Against Women (World Health Organization, 2001).

## **2.4. The prevalence of interpersonal violence**

### **2.4.1. The prevalence of interpersonal violence in the world**

Most of the studies about the prevalence of IV have focused on the prevalence of specific forms of IV, for the reasons discussed in chapter “Polyvictimization”. Therefore, in this chapter available statistics about different forms are presented separately.

According to the WHO report, the global prevalence of physical and/or sexual IPV among all ever-partnered women was 30.0%. The highest rates of IPV were reported in African, Eastern-Mediterranean and South-East Asian regions, where approximately 37% of women reported lifetime exposure to IPV. Globally, 7.2% of women reported ever having experienced non-partner SV. The combined estimate of exposure to PhV and/or SV perpetrated either by partner or non-partner during lifetime among women was 35.6 %. Most of this violence is perpetrated by intimate partners (World Health Organization et al., 2013).

In the U.S. the National Intimate Partner and Sexual Violence Survey (NISVS) demonstrated that among women the prevalence of contact SV during lifetime was 36.3% and during last 12 months 4.0%, among men the percentages were accordingly 17.1 and 3.7 (Smith et al., 2017). The prevalence of IPV (contact SV, PhV, and/or stalking) among women during lifetime was 37.3% and during the last 12 months 6.6%, among men 30.9% and 6.4% accordingly (Smith et al., 2017). Exposure to severe PhV (hit with a fist or something hard, hurt by pulling hair, slammed against something, choking or suffocating, beaten, burned, use of knife or gun) by intimate partner during lifetime was reported by 23.3% of women and 13.9% of men (Smith et al., 2017).

Violence against children is unfortunately still very common everywhere in the world. All forms of violence against children are most often perpetrated at home by somebody known to the child (Mock et al., 2017). One of the largest studies carried out regarding childhood abuse, neglect, household challenges and later-life health and well-being is the Centers for Disease Control and-Kaiser Permanente ACEs Study (Centers for Disease Control and Prevention, 2020). In that study, the prevalence of EV in childhood among women was 13.1%, PhV 27% and SV 24.7% (Centers for Disease Control and Prevention, 2020). Among men, the percentages were accordingly 7.7, 29.9 and 16 (Centers for Disease Control and Prevention, 2020).

In a meta-analysis of childhood violence, the overall estimated prevalence globally for self-report studies were 12.7% for SV, 22.6% for PhV, 36.3% for

EV, 16.3% for physical neglect and 18.4% for emotional neglect (Stoltenborgh, Bakermans-Kranenburg, Alink, & van IJzendoorn, 2015; Stoltenborgh et al., 2011). Self-reported childhood SV was more common among female (18.0%) than among male respondents (7.6%) (Stoltenborgh et al., 2011).

#### **2.4.2. The prevalence of interpersonal violence in the European Union and Estonia**

According to the survey “Violence against women: An EU-wide survey” carried out by the European Union Agency for Fundamental Rights (FRA) in 2014, 33% of women in the European Union (EU) had been exposed to PhV and/or SV by a partner or non-partner since the age of 15 and Estonia was exactly on the average level. The prevalence in Estonia was similar to other Baltic countries, in Latvia the prevalence was 39% and in Lithuania 31%. The lowest prevalence was in Poland, where only 19% of women reported exposure to physical and/or sexual violence by a partner or a non-partner since the age of 15, which raises the question about recognizing and willingness to disclose exposure to violence in one of the most conservative countries in the EU. According to the FRA survey, 8% of women had been exposed to PhV and/or SV during the 12 months before the survey. Among women who had ever had a partner, 22% had been exposed to PhV and/or SV by a partner and one in 20 women had been raped since the age of 15. 35% reported experiencing EV, PhV, or SV before the age of 15 by an adult perpetrator (European Union Agency for Fundamental Rights, 2014).

In a study carried out in Sweden using the NorAQ, the prevalence of EV, PhV and SV among men were 5.6%, 22.2% and 1.4% (Simmons, Wijma, & Swahnberg, 2014). Among women, prevalence was accordingly 6.6%, 7.0% and 5.5%. Among men 9.6% were exposed to the combination of EV and PhV, 0.5% to the combination of EV and SV, 0.9% to the combination of PhV and SV and 2.2% to all three forms. Among women, these combinations of different forms were reported accordingly by 5.5%, 3.0%, 1.7% and 6.7%. In addition to reporting being exposed to more than one form of violence, women also reported more often more than one perpetrator (Simmons et al., 2014). In another Swedish study looking at the prevalence of IPV, it was found that past year exposure rates to EV, PhV and SV were similar across gender, however, earlier in life exposure to all three forms were significantly higher among women (Nybergh, Taft, Enander, & Krantz, 2013).

In Estonia, according to the FRA study, 30% of women had been exposed to PhV and 13% to SV by a partner or non-partner since the age of 15. 19% had been exposed to physical IPV, 7% to sexual IPV and 38% to psychological IPV which included controlling behaviour since the age of 15 (European Union Agency for Fundamental Rights, 2014). During the 12 months prior to the study, 5% of women had been exposed to PhV or SV by a partner or non-partner (European Union Agency for Fundamental Rights, 2014). In Estonia, 50% of women had been exposed to EV, PhV or SV before the age of 15 by an adult perpetrator

(European Union Agency for Fundamental Rights, 2014). In a study carried out among pregnant women in six northern European countries, 27.7% of women in Estonia had any lifetime exposure to EV, 30.8% to PhV and 18.0% to SV (Lukasse, Schroll, Ryding, & Campbell, 2014). During the 12 months prior to the survey 5.0% had been exposed to EV, 2.8% to PhV and 0.8% to SV (Lukasse et al., 2014). In comparison with other countries, Estonia had the highest prevalence of “any abuse” with 45.4% reporting any lifetime abuse and 6.5% any current abuse (Lukasse et al., 2014).

In the study “The prevalence and attitudes towards sexual abuse among children and youth” carried out in Estonia, 36% of female and 20% of male respondents had been exposed to at least one form of SV during lifetime (Hillep & Pärnamets, 2020).

The number of registered domestic violence cases in Estonia has been steadily increasing during the last 10 years (Justiitsministeerium, 2019). Also, the number of sexual crimes has significantly increased, in 2009 a little over 300 sexual crimes were registered and in 2019 the number was 643. In 2019 ninety one cases of rape of an underaged person were registered and 112 cases of rape of an adult (Justiitsministeerium, 2019). As discussed earlier, these numbers show only the tip of the iceberg, as due to many different barriers the majority of the cases remain unreported. The increase in the reported cases is more indicative of the improved knowledge due to the public attention the issue has gained during the past decade than in the increase of the total number of cases.

## **2.5. The burden of interpersonal violence**

### **2.5.1. Impact on health and health behaviour**

Exposure to IV has been associated with various negative health consequences. The health consequences of IV can be divided into immediate and acute, long-lasting and chronic, and/or fatal (Garcia-Moreno et al., 2012). Although different forms of IV can differ in the extent and severity of health sequelae, it is clear from an increasing number of studies that exposure to any form of violence can have negative physical and mental health consequences and in addition to that, different forms of violence tend to coexist and have additive negative effects on health (Felitti et al., 1998; Finkelhor et al., 2007a). Being aware of the potentially different health outcomes of different victimization profiles may improve the quality of clinical interventions (Charak et al., 2020).

So far the majority of the research on the health consequences of IV has been carried out on different forms separately, which consequently means, that the understanding of the associations between IV and negative health outcomes is still fragmented (Simmons, 2015). For that reason, we present here currently established associations between health and different forms of IV separately.

### **2.5.1.1. Intimate partner violence**

IPV is known to increase the prevalence of physical injuries, most common are facial fractures, but also other traumas (J. Campbell, 2002; Porter et al., 2019). Repeated head traumas and attempted strangulation have been shown to lead to traumatic brain injury which is associated with several neurological symptoms (Kwako et al., 2011). IPV has also been associated with long-term physical health problems, such as chronic pain syndromes, fibromyalgia, gastrointestinal problems (Krug et al., 2002; Smith et al., 2017). In the NISVS survey, women reported significantly more often having any IPV related impact on their health (73.4% of women and 35.7% of men). 19.3% of women reported that they needed medical care, in contrast only 5.4% of men, due to IPV (Smith et al., 2017).

Exposure to IPV has been associated with poorer mental health outcomes, such as increased levels of depression, anxiety, eating and sleep disorders, panic disorder post-traumatic stress disorder (PTSD), suicidal thoughts, self-harm and suicide attempts, alcohol and drug abuse and smoking (Coker et al., 2002; Devries et al., 2011; Krug et al., 2002; World Health Organization et al., 2013).

Due to the controlling mechanisms seen in IPV, women who are in violent relationships have decreased control over their reproductive choices, which can lead to unplanned and unwanted pregnancies and also sexually transmitted infections (STIs) (Draughon et al., 2015; Dunkle et al., 2004; Smith et al., 2017). IPV occurs and even tends to increase during pregnancy, which can cause miscarriage, late entry into prenatal care, stillbirth, premature labour and birth, fetal injury and low birth weight (J. Campbell, 2002; Krug et al., 2002). Various gynaecological problems (menstrual cycle disorders, chronic pelvic pain, dyspareunia) have been associated with exposure to IPV (J. Campbell, 2002; H. Mark, Bitzker, Klapp, & Rauchfuss, 2008). In a study carried out in Estonia, exposure to IPV was associated with contraception non-use, or the use of unreliable methods, repeat induced abortion, STIs and dyspareunia (Laanpere, Ringmets, Part, & Karro, 2013).

### **2.5.1.2. Sexual violence**

Exposure to SV has been associated with various negative health outcomes and an increase in risky health behaviours (R. Campbell et al., 2009). SV may be accompanied by PhV but contrary to common belief it is not necessarily always so (Krug et al., 2002). Therefore, physical injuries may be an immediate result of SV, but generally, there are few physical injuries after sexual assaults and genital injuries are minor (Tiihonen Möller, 2015).

Numerous somatic health problems have been associated with exposure to SV, such as gastrointestinal problems, non-specific chronic pain, psychogenic seizures, migraines, endocrinological and urinary tract diseases, self-estimated poor health, many healthcare visits, high incidence of sick leave and disability (Eberhard-Gran, Schei, & Eskild, 2007; Hilden et al., 2004; Paras et al., 2009; Santaularia et al., 2014).



Exposure to SV is associated with a wide array of mental health consequences. It has been shown that among women exposed to SV there is increased risk for PTSD, suicidal behaviour, depression, anxiety, unhealthy eating habits, substance use, binge-drinking, smoking (Basile et al., 2006; Champion et al., 2004). In Sweden nearly 40% of women who had been sexually assaulted developed PTSD during the 6-month follow-up period (Tiihonen Möller, 2015). SV also appears to be associated with an increased risk for bipolar and obsessive-compulsive disorders (Dworkin, Menon, Bystrynski, & Allen, 2017). Although these disorders are known to have genetic background, exposure to trauma seems to play role in the development of these disorders (Cromer, Schmidt, & Murphy, 2007; Etain, Henry, Bellivier, Mathieu, & Leboyer, 2008).

Various sexual and reproductive health consequences have been associated with exposure to SV. Immediate consequences of SV can be unwanted pregnancy, getting infected with STIs and genito-anal traumas, which can cause blood loss and infections (Jina & Thomas, 2013). Different incidence rates of unwanted pregnancies as a result of SV have been reported, varying from 5% to 18% (Krug et al., 2002). During pregnancy, previous exposure to SV has been associated with suffering from more pregnancy-related physical symptoms, concerns related to childbirth and decreased expectation for the arrival of the infant (Henriksen, Schei, & Lukasse, 2016; Lukasse, Henriksen, Vangen, & Schei, 2012). Among women exposed to SV, childbirth can reactivate the memories related to SV, cause the feeling of losing control over one's body and lead to re-traumatization (Halvorsen, Nerum, Øian, & Sorlie, 2013). Over a longer period of time dysmenorrhea, dyspareunia, chronic pelvic pain and lack of sexual pleasure have been found (Jina & Thomas, 2013; Krug et al., 2002). SV at early age decreases the feeling that sexuality is something the person has control over (Krug et al., 2002). This may lead to a decreased ability to negotiate the use of condom or other forms of contraception, increasing the risk for unplanned pregnancy (Krug et al., 2002). Exposure to SV has been associated also with increased risk for engaging in prostitution, as some women exposed to SV see it as a way for regaining control over access to their body, others need money for substance use, which often appears or worsens after exposure to SV (R. Campbell, Ahrens, Sefl, & Clark, 2003).

### ***2.5.1.3. Polyvictimization and health***

With gradual improvement in the knowledge regarding the associations between violence and health, understanding that different forms of violence have additive effects has emerged (Aho, Gren-Landell, & Svedin, 2016; Boynton-Jarrett, Ryan, Berkman, & Wright, 2008; R. Campbell, Greeson, Bybee, & Raja, 2008; Finkelhor et al., 2007a; Follette, Polusny, Bechtle, & Naugle, 1996; Simmons, Wijma, & Swahnberg, 2015). Most of the studies, however have focused on the effects of childhood victimization to adulthood health, not cumulative violence over lifetime (Bigras, Daspe, Godbout, Briere, & Sabourin, 2017). PV has been associated with poorer health outcomes than any form of IV separately (Felitti et al., 1998;

Finkelhor et al., 2007b). Studies have demonstrated that with higher number of violence exposures the negative effects on health become more evident (Boynton-Jarrett et al., 2008; Davies et al., 2015; Nicolaidis, Curry, McFarland, & Gerrity, 2004; Simmons et al., 2015).

Exposure to multiple ACEs has been shown to be associated with the leading causes of death in adulthood and common public health problems (Felitti et al., 1998). In a recent meta-analysis health consequences of ACEs were analysed, the associations were weak or modest for physical inactivity, overweight or obesity, and diabetes; moderate for smoking, poor self-rated health, cancer, heart disease, and respiratory disease and strong for sexual risk taking behaviours (Hughes et al., 2017).

PV is associated with the prevalence and severity of mental health problems (Sundermann, Chu, & DePrince, 2013). Polyvictimized persons have a higher risk for anxiety, depression, and PTSD, even when compared with those who had been exposed to SV or PhV (Charak et al., 2020). They also experienced more emotional non-acceptance, which refers to an unwillingness to experience emotional states, including cognitive and behavioral attempts to avoid experiences of emotion. This has been associated with the severity of depression, dissociation and PTSD following traumatic experiences (Sundermann et al., 2013). Exposure to ACEs has been associated with problematic alcohol and drug use, and self-directed violence (Hughes et al., 2017).

Studies looking at PV during lifetime and associations with sexual health are limited. Cumulative childhood trauma has been associated with lower levels of sexual satisfaction (Bigras et al., 2017). Among college-aged women, exposure to PV in childhood has been associated with increased risky sexual behaviours (Alexander, Amerigo, & Harrelson, 2018)

#### ***2.5.1.4. Mechanisms leading to health problems***

While the pathways through which exposure to violence leads to immediate health consequences is easy to comprehend, understanding the mechanisms behind long-term health consequences is much more complex. There is evidence, which can explain the findings of poor physical, mental and sexual health on a physiological level to some extent, but the whole mechanism behind it needs further investigation (Crofford, 2007; Eberhard-Gran et al., 2007; Nicolaidis et al., 2004; Tiihonen Möller, 2015).

It has been shown, that exposure to violence is associated with altered biological stress-adaptation systems (Crofford, 2007). Exposure to violence has been associated with both hypo- and hyperactivity of the hypothalamic-pituitary-adrenal (HPA) axis (Aiyer, Heinze, Miller, Stoddard, & Zimmerman, 2014; Heim et al., 2013). The attenuation hypothesis suggests that, under chronic stress, the activity of the HPA axis may adapt to prolonged hypersecretion of cortisol by downregulation, resulting in a period of hyposecretion (Aiyer et al., 2014; Heim, Ehlert, & Hellhammer, 2000; Trickett, Noll, Susman, Shenk, & Putnam, 2010). Research suggests that cumulative exposure to violence causes initially an

increase in cortisol release, but over repeated exposures, it decreases and response to stressful situations is altered (Aiyer et al., 2014). Decreased levels of cortisol have shown to be associated with the development of stress-related bodily disorders, namely immune-related disorders and chronic pain syndromes (Heim et al., 2000). In addition to that, exposure to ACEs has been shown to cause low-grade inflammation, associated with developing psychopathology and physical health problems in adulthood (Danese & Baldwin, 2017; Rasmussen et al., 2020)

### **2.5.2. Mortality**

The Global Health Estimates of WHO indicated that 475,000 persons died as a result of IV in year 2019 (World Health Organization, 2019). At the global level, men are around four times more likely than women to be victims of intentional homicide, in around 80% of all homicides victims are male and 20% female (UNODC, 2018).

While the majority of intentional homicide victims are male, the majority of the victims of intimate partner/family-related homicide are women. Globally about one in seven homicides and more than one in three murders of women, are committed by the intimate partners (Stöckl et al., 2013). In 2017 in total 87,000 women were intentionally killed and more than half of them were killed by intimate partners or family members (UNODC, 2018).

In Estonia 8773 violent crimes were registered in year 2019 and out of them, 74% were physical abuse. During the last five years, 46 persons in total were killed as a result of domestic violence/IPV and in 80% of these cases, the perpetrator was a man. The victim was a woman in 54% of the cases and among women the perpetrator was most often their intimate partner, whereas among men, it was often some other family member (Justiitsministeerium, 2019).

### **2.5.3. Economic burden**

In addition to causing significant suffering and pain to the victims, IV also causes remarkable monetary losses. It can be argued that it is impossible to put a monetary value on human suffering and therefore this kind of cost analysis adds no value to the overall understanding of violence. However, having estimations about the price of this phenomenon helps to draw attention to the issue, understand the magnitude of it and carry out cost benefit analysis for the prevention programs and allocate public funds.

There is no universally accepted method for calculating the costs of violence and in the literature different approaches can be seen. Although there is currently no methodology to calculate the true cost of violence, estimations including direct and indirect costs are considered to be more precise (Iqbal, Bardwell, & Hammond, 2019). Calculations using only direct costs vastly underestimate the additional social and developmental costs (Institute of Medicine & National Research

Council, 2012). Direct costs arise proximal to the violent event, such as medical costs, policing, property damage, they can be divided into medical and non-medical costs and require actual payments by individuals or institutions (Butchart et al., 2008; Institute of Medicine & National Research Council, 2012). Indirect costs are the consequence of lost opportunities due to violence (Butchart et al., 2008; Institute of Medicine & National Research Council, 2012). Indirect costs taken into account in calculations are for example reduced productivity or output by the victim, lost investments in social capital (e.g., education of the victim and perpetrator), reduced quality of life (Butchart et al., 2008). The medical care, lost income and criminal justice system cost are relatively straightforward to measure, indirect costs of pain, suffering, decreased quality of life and psychological distress are more difficult to monetize and are the main reason for variations in the cost estimates (Hoeffler, 2017).

Hoeffler calculated in her paper, that the estimate of the annual costs of collective and IV is around \$9.4 trillion, which is about 11 per cent of World gross domestic product (GDP). She also pointed out that due to the high prevalence of violence against women and children it makes up about 85 per cent of the total cost estimate (Hoeffler, 2017). The total cost of child abuse was estimated to be \$3.6 trillion and IPV \$4.4 trillion, resulting together in an estimate 26 times higher than the cost of collective violence (war and terrorism) (Hoeffler, 2017). Iqbal et al estimate the global impact of violence to be \$14.76 trillion or 12.4 per cent of the world GDP. IV making up \$3,650 billion or 25 per cent of the total economic impact, violence containment (including military expenditure, police and judicial system) \$9,928 billion and collective violence \$1.02 billion (Iqbal et al., 2019). Estonia was ranked to be 89<sup>th</sup> in the World based on percentage of the economic cost of violence of GDP, which was estimated to be 7 per cent (Iqbal et al., 2019).

A study carried out by the European Institute for Gender Equality estimated the cost of IPV in the EU to be €122 177 800 785, of which €109 125 574 091 was the cost of IPV against women (European Institute for Gender Equality, 2014). The cost to the EU of gender-based violence against women was €225 837 418 768, and this represented 87% of the total cost of gender-based violence to the EU which was estimated to be €258 728 837 747 (European Institute for Gender Equality, 2014).

In Estonia, the cost of domestic violence has estimated to be from €116.5 million per year to €320.8 million (European Institute for Gender Equality, 2014; Pettai, Tiit, Ruubel, Rist, & Laidmäe, 2016).

## **2.6. Historical background and social context of Estonia**

During the last century, major socio-political changes have taken place in Estonia. Estonia was occupied by the Soviet Union from 1940 until 1991. During the occupation, gender equality was formally promoted, because it was useful in the international arena, however in reality women's rights were ignored (Marcus,

2009; Oja, 2017). Women had a dual role as “workers-mothers”, which in reality put an even larger burden on their shoulders (Marcus, 2009). Violence against women was seen as a personal issue, not taken seriously by the law enforcement, no studies of any form of violence were carried out, and no reliable data were available on the prevalence of gender-based violence (Marcus, 2009).

In 1991 Estonia regained independence and a transition period to a democratic country and market economy from command economy followed. Similarly, to other countries in the Eastern-European region, the transition period was turbulent and changes in the society were very rapid. During the restructuring period violent crime and unemployment increased, some data suggests also that the number of rapes increased, and murder rates were one of the highest in Europe (International Child Development Centre, 1999; Saar, Markina, Ahven, Annist, & Ginter, 2002). Due to socio-economic segregation, sudden freedom of movement and a big gap in living standards in comparison with Western-European and Nordic countries, prostitution and human trafficking became problematic (Eespere, Szymanel, Ristikivi, & Markus, 2006). Since the 1990s until today, the development of Estonia has been very rapid and huge improvements in the society have taken place. Estonia has become a member of the EU and North Atlantic Treaty Organization (NATO) and has the highest human developmental index and second highest GDP per capita among post-Soviet countries (International Monetary Fund, 2020; United Nations Development Programme, 2020). There is evidence of an increase in community awareness reinforcing understanding that domestic violence must no longer be seen as a “private” matter. National violence prevention strategy has been created and domestic violence has been a police priority. Several interventions on national level have been introduced to tackle the issue of IV. For example, integrating the topic into mandatory school curricula and special anti-bullying school programs, special services for IPV and SV victims have been introduced.

Although changes during the past thirty years have been impressive, there are still signs in the present Estonian society, reminding the long period of occupation. Being aware of the recent history of Estonia helps to understand, why in comparison with neighbouring countries in the North, there are relatively few data available regarding IV, especially prior to the year 2000. In the context of IV, which is deeply embedded in gender equality, it also helps to explain at least to some extent, why there is a wide gap in gender equality and in the attitudes and knowledge regarding IV when comparing Estonia to Finland or Sweden (European Union Agency for Fundamental Rights, 2014). The gender equality index is a tool developed in the EU to measure how close a country is to gender equality, with scores closer to 100 showing higher equality. In Estonia it is 60.7, in Finland 74.7 and in Sweden 83.8 (European Institute for Gender Equality, 2020). Every fifth person in Estonia still considers domestic violence to be a private issue and forced intercourse is not considered to be SV by almost every tenth person (Eesti Seksuaaltervise Liit, 2014; TNS Emor, 2016). In Estonia women still do the majority of unpaid chores at home, while working at the same time (Estonian Ministry of Social Affairs, 2016). Estonia has also one of the largest pay-gaps in

EU and gender poverty gaps among the Organisation for Economic Co-operation and Development (OECD) countries (Eurostat, 2018; OECD, 2019).

Most of the research about violence has been carried out in the U.S., Western-European and Nordic countries. However, like previously mentioned, violence is a phenomenon affected by the cultural context. Therefore, to be able to create culturally appropriate prevention strategies and provide necessary services for violence survivors, locally carried out research is needed.

### **3. AIMS OF THE RESEARCH**

The main aim of this research was to provide evidence concerning the prevalence, risk factors and associations with health of different forms of interpersonal violence and polyvictimization among men and women in Estonia.

The specific objectives were:

1. To examine the prevalence of sexual violence and to explore the associations with risky health and sexual behaviours among women.
2. To estimate prevalence of emotional, physical, and sexual violence and polyvictimization; and to find the associations with general, mental, and sexual health among women.
3. To describe the prevalence and patterns of interpersonal violence; and to investigate socio-demographic characteristics associated with exposure to polyvictimization among men and women.

## 4. MATERIALS AND METHODS

This research is based on two cross-sectional surveys carried out in Estonia in 2014. Estonian Women's Health 2014: sexual and reproductive health, health behaviour, attitudes and use of healthcare services (hereafter Estonian Women's Health Survey, EWHS) and Survey of Estonian men's attitude and behaviour: health, education, employment, migration and family formation (hereafter Estonian Men's Survey, EMS) (study III) (Lippus et al., 2015; Themás et al., 2015).

The first EWHS survey was carried out in 2004 and where it was possible, similar or same questions were used (Lippus et al., 2015; Part et al., 2007). After careful consideration in the survey carried out in 2014, questions regarding exposure to violence were replaced with an internationally used and validated violence measuring instrument, the NorAQ. It was done to allow comparison between the results of EWHS 2014 and other countries where the same instrument has been used. In addition to that, as NorAQ has been validated both among men and women, and therefore it was possible to use the same violence measuring instrument in both EWHS and EMS (Swahnberg, 2011; Swahnberg & Wijma, 2003).

The questionnaire of EWHS consisted of 121 multiple choice questions and was organized into seven modules:

1. Background information
2. Intimate relationship and sexuality
3. Pregnancy and children
4. Health services
5. Contraceptive methods
6. Plans for having children
7. Health

Although there were differences in the sampling methods and questionnaire of the EMS, it was taken into account when designing the surveys that the results of the studies would be comparable (Themás et al., 2015). The EMS questionnaire consisted of 135 mainly multiple-choice questions and was organized into six modules as follows:

1. Background information
2. Family and children
3. Work
4. Living abroad and plans
5. Intimate relationship and sexuality
6. Health and risky behaviours

Due to fact that according to the population census carried out in year 2011, 25.2% of the population in Estonia is Russian speaking (Statistics Estonia, 2013), questionnaires of both surveys were available in Estonian and in Russian.



## **4.1. Data sources and collection**

### **4.1.1. Estonian Women's Health Survey**

The target population of the EWHS was the whole female population aged 16–44 of Estonia. While calculating the sample size, the response rate 41.2% of a similar survey carried out in Estonia was taken into account (Haavio-Mannila & Kontula, 2001). One of the aims of the survey was to give information about sexual practices, in order to get enough respondents with sexual experiences, data from previous EWHS survey about women with sexual experiences in each age-group was used in calculations (Part et al., 2007). After carrying out power calculations, the initial sample size was 5233 women, which made up 2.1% of the total female population aged 16–44 years living in Estonia in 2013. Random sample stratified by age groups (2112 (16–17 y), 1144 (18–24 y), 993 (25–34 y), 984 (35–44 y)) was taken from the Estonian Population Registry. OpenEpi software package was used for the sample size calculations (Dean, Sullivan, & Soe, 2013).

The questionnaires were posted in March 2014, in total 5233 questionnaires were sent out (3811 in Estonian and 1422 in Russian). The language of the sent-out questionnaire was decided based on the name acquired from the population registry. On request, the questionnaire in either language was available. In addition to the questionnaire, the envelope sent to each participant contained a note explaining the objectives of the study, a prepaid envelope for returning the filled questionnaire, and a prepaid envelope was added with an individual study code. The individual code was asked to return in a separate envelope to guarantee the anonymity of the respondents but at the same time have an overview of people who had or had not responded. The package also gave information about the option to complete the survey electronically and a link to the questionnaire. The electronic questionnaire was identical to the questionnaire on paper and was made available using LimeSurvey. The electronic questionnaire was available only after entering the individual study code, which was then stored in a separate database so that the filled questionnaire could not be linked back to the specific code entered earlier. In April 2014, 3882 reminders were posted. Four weeks after the reminder, 3367 questionnaires (2265 in Estonian and 1102 in Russian) with an individual code and accompanying letter were posted.

Out of the initial sample, 40 women were not able to respond (27 were living abroad, four did not live at the address given by the population registry, one was dead and eight did not reply due to health reasons). Out of 5193 eligible respondents, 2708 did not return the questionnaire and 12 refused to answer. Of the questionnaires filled, 24 were returned with only a few answered questions, six had conflicting answers and in three cases the respondent over 45 years old. The final response rate was 47.0%. The response rate according to the language of the questionnaire was 51.7% in Estonian and 33.4% in Russian. More detailed study description and tables based on the results of the survey can be found in the survey report (Lippus et al., 2015).

### 4.1.2. Estonian Men's Survey

The age group included to the EMS survey was wider than the one included to the EWHS, due to different aims of the survey and men's age when having children. EMS sample was based on the Estonian Population Registry data and after carrying out power analysis, the initial sample size was 4800 men, which made up 1.5% of the male population aged 16–54 living in Estonia in 2013.

**Table 1.** Description of the survey designs of Estonian Women's Health Survey and Estonian Men's Survey

	<b>Estonian Women's Health Survey</b>	<b>Estonian Men's Survey</b>
Data source	The Estonian Population Registry	
Sample frame	Estonian female population aged 16–44	Estonian male population aged 16–54
Initial sample size	5233	4800
Sampling	Age stratified (16–17, 18–24, 25–34, 35–44 years) random sample	Age stratified (16–17, 18–24, 25–34, 35–44, 45–54) systematic random sample, where age was sorted in descending order and sampling interval was 66
Study design	Cross-sectional	
Data collection	Questionnaire was sent out with personal study code, for the non-respondents one reminder and one repeated posting of the questionnaire. Electronic questionnaire available with personal code.	An invitation to respond to the questionnaire with personal survey code was sent out, questionnaire on paper was available on request. Three reminders were sent out to the non-respondents. Researchers visited men who had not responded after three reminders, they gave out questionnaire and later collected questionnaire in sealed envelope.
Measurement	Self-administered questionnaire	
Data collection	March – May 2014	September – December 2014
Corrected response rate	47.0%	45.9%
Proportion of the respondents who answered on paper/electronically	16.6% electronically 83.4% on paper	93% electronically 2.2% on paper 4.8% questionnaire on paper was returned by researcher
Incentive	25 gift-cards (60 euros each) were raffled off among the respondents	15 gift-cards (20 euros each) were raffled off among the respondents

The male population of Estonia in this age group was sorted by age (in descending order) with a sampling interval of 66 and systematic random sampling was carried out. A letter was sent to the eligible respondents, which contained an invitation to participate in the survey, information regarding the EMS, a link to the electronic questionnaire and a personal code to access it. Information was both in Estonian and Russian. SurveyMonkey platform was used to create the electronic questionnaire. On request, the questionnaire on paper with a prepaid envelope to return it, and a card with a personal code which had to be posted separately, was available. The researchers visited men who had not responded by either paper or electronic questionnaire after three reminders. They gave out the questionnaires and later collected filled ones in sealed envelopes. Out of the 4621 eligible respondents, 2119 responded either electronically (95.6%), returned the questionnaire by post (2.2%) or the questionnaire was returned by the researcher (4.8%). Thirty questionnaires were returned with only a few questions answered and 21 were not filled out by intended person and were therefore left out of the analysis. The corrected response rate was 45.9%. More detailed description of the EMS methods can be found in the survey report (Themas et al., 2015).

#### **4.1.3. Violence measuring instrument**

The NorAQ was used for measuring exposure to IV in both surveys. In the NorAQ three questions about exposure to EV and PhV and four questions about SV are asked. Questions are behaviourally specific and for each question the respondent can choose between 4 predefined options: 1) no; 2) as a child (before the age of 18); 3) yes, as an adult (when being 18 years old or older) 4) yes, as a child and as an adult (before and after the age of 18). The NorAQ has been validated both among men and women in Sweden (Swahnberg, 2011; Swahnberg & Wijma, 2003). Among women the sensitivity of the original instrument ranged from 75% to 96% and specificity from 85% to 98% (Swahnberg & Wijma, 2003). Among men the sensitivity of the original instrument was 68%–83% (sensitivity was the lowest in questions about SV) and specificity 72%–99% (Swahnberg, 2011). Both among men and women, the specificity of the question about mild PhV was low. Due to the low concurrent validity this question was excluded from the analysis. NorAQ was translated into Estonian and Russian by native-speakers and then translated back into source language. The original and back-translated versions were used to determine the final consensus version of the questionnaire (Lukasse et al., 2014).

## 4.2. Study subjects

### *Study I*

Out of the 2440, 727 respondents were excluded because they were 16–17 years old or 45 years old. Respondents aged 16–17 years were excluded, because only 50.6% of the respondents in that age group had experienced sexual intercourse and one of the aims of the study was to evaluate the associations between exposure to SV and risky sexual behaviour. 37 respondents were excluded as they had not responded to the question about SV and 6 persons had “other” native language. The final sample size was 1670.

### *Study II*

Out of the 2440 respondents, 23 were excluded who has not answered to the question about their native language or it was other than Estonian or Russian. 27 were 45 years old or had not answered to the question about age. 57 respondents were excluded because they had not answered to the questions about exposure to violence. The final sample size was 2333.

### *Study III*

To allow comparisons across the EWHS and EMS and considering the nature of the questions used in the analysis, only men and women aged 18–44 years were included to the analysis, thus 749 women and 611 men were excluded from the analysis. 23 were excluded who has not answered to the question about their native language or it was other than Estonian or Russian. In addition to that, 78 women and 264 men who had not answered to at least one question about exposure to violence were excluded. The final sample size was 1590 women and 1244 men.

## 4.3. Study variables

Overview of the variables used in studies I–III are presented in Table 2.

**Table 2.** Sociodemographic, independent, and dependent variables.

<b>Study</b>	<b>Independent variables</b>	<b>Dependent variable</b>
I	Age, native language, education, marital status, occupation, difficulties paying bills, lifetime exposure to sexual violence	Smoking, alcohol consumption, illicit drug use, contraception non-use, sexual intercourse for money/material reward, concurrent sexual relationships, sexually transmitted infections
II	Age, native language, education, marital status, occupation, difficulties paying bills, exposure to one to three forms of interpersonal violence	Poor self-perceived health, daily activities limited due to chronic health problems, depressive feelings, dissatisfaction with life, stress and worry due to sex life, sexual dysfunction

Study	Independent variables	Dependent variable
III	Age, native language, education, education of mother, education of father, marital status, having biological children, estimation of financial situation, sexual orientation, exposure to violence in childhood	Exposure to one form of violence in adulthood, exposure to polyvictimization in adulthood

### *Independent variables*

**Age** In studies I and III respondents aged 18–44 years were included and divided into three subgroups as follows: 18–24; 25–34; 35–44 years. In study II additionally respondents aged 16–17 years were included. In studies I and III, the age of the respondents was restricted to 18–44 years due to the nature of the variables used in the analysis. In study I majority of the dependent variables used were associated with risky sexual behaviour and only 50.6% of the respondents aged 16–17 had experienced sexual intercourse. In study III exposure to violence in adulthood was used as the dependent variable and respondents under the age of 18 could not have been exposed to it. Men aged 45–54 were left out of the analysis to enable comparison across gender.

**Native language** in study I, two groups based on the language spoken were created (Estonian; Russian), in studies II and III respondents who had another native language than Estonian were grouped together (Estonian/ Russian or other).

Based on the **level of education** respondents were categorized into three groups as follows: basic or less; secondary/vocational secondary; vocational higher/ bachelor’s degree/ master’s or doctoral degree.

**Marital status** was divided into three groups in studies I and II as follows: married/cohabiting; separated/divorced/widowed; single. Or into three group in study III including the following options: married; cohabiting; separated/divorced/widowed; single).

**Employment status** was included in studies I and II and divided into four groups: employed; pupil/student/postgraduate student; on pregnancy or parental leave; retired/disability pension.

**Economic situation** in studies I and II was determined based on the question “Do you have difficulties with paying bills” and divided into three groups (always/often; sometimes; rarely/never). In study III question “How do you estimate your financial situation” was used and respondents were categorized into three groups (very good/good; neither good nor bad; bad/very bad).

**Having biological children** used in study III was dichotomized (no child; at least one child).

**Sexual orientation** in study III was dichotomized (only or mainly heterosexual; bi-or homosexual).

Exposure to **violence in childhood** in study III was divided into 3 groups (no exposure; exposure to one form of violence; PV).

## *Dependent variables*

### *Study I*

Seven variables were used to determine risky health and sexual behaviour. To be able to carry out multiple logistic regression analysis, all variables were dichotomized. For risky behaviour, the following variables were analysed: smoking (never a smoker; past/current smoker), drinking enough alcohol to lose control of oneself (daily/weekly/monthly/less often than monthly; never) during the last 12 months, and ever using illicit drugs (no; yes) were considered in analysis. To evaluate risky sexual health behaviour four questions were analysed: 1) "Which contraceptive method did you use during your last sexual intercourse?" the question was followed by a comprehensive list of contraceptives (women who did not need contraception because they were pregnant, wanted to get pregnant, or were breastfeeding a less than 6-month-old baby (n=169) were left out of the analysis); 2) "Have you been asked to have sex in exchange for money or other material reward?", based on the response, women were grouped in two: those who had never been asked such question or those who had refused the offer and to the second group women who had accepted the offer; 3) "Have you had concurrent sexual relationships during your present marriage/cohabitation" was used to assess whether the respondent had concurrent sexual relationships (only women, who currently were in a relationship were included (n=191 were left out)) and based on the response, respondents were categorized into two groups (yes; no); 4) "Have you ever been diagnosed with any of the following illnesses?", the list the respondent could choose from included chlamydia, gonorrhoea, trichomoniasis, HIV/AIDS and syphilis. The respondents were categorized into two groups (yes; no). Respondents who did not know if they had been diagnosed or had not been tested were left out from the analysis (n=116).

### *Study II*

Six variables were used to analyse self-perceived health, life satisfaction and sexual health. Due to the nature of multiple logistic regression analysis, all variables were dichotomized. The following questions used were: self-perceived health (very good/good/neither good nor bad; poor/very poor), having long-term illnesses or health problems that limit everyday activities (yes; no), experiencing feelings of hopelessness, despondency, and depression during the previous year (not at all/on several days; on more than half of days/almost every day/every day), agreeing with the statement "In general I am satisfied with my life at the moment" and "I feel distressed and worried about my sex life" (completely agree/agree/neither agree nor disagree; disagree/completely disagree). The last variable included was an aggregate measure which was created in accordance with the classification of DSM-V of female sexual interest/arousal disorder, orgasmic disorder and genito-pelvic pain/penetration disorder to evaluate sexual dysfunction (Latif & Diamond, 2013). The presence or absence of the following seven conditions were included to the measure: lack of interest in having sex; lack of enjoyment in sex; anxiety during sex; physical pain during or after sex in the

genital region (vaginal opening, vagina, lower abdomen); no excitement or arousal during sex; not reaching a climax; having uncomfortably dry vagina. For any of these questions, the respondent could choose between answering yes or no. In the aggregate measure “Sexual dysfunction” all respondents giving an affirmative answer to more than three of these situations were categorized as self-reporting sexual dysfunction.

In studies II and III an aggregate measure was created for evaluating exposure to violence during lifetime. In study II it was used as an independent variable and in study III as a dependent variable. Respondents were grouped into eight categories according to their lifetime exposure to different forms of violence and their combinations as follows: 1. none; 2. emotional; 3. physical; 4. sexual; 5. emotional and physical; 6. emotional and sexual; 7. physical and sexual; 8. emotional, physical and sexual. In study II four categories according to the number of exposures to different forms of violence were created: 1. no exposure; 2. exposure to one form; 3. exposure to two forms; 4. exposure to all three forms. The last two groups referred to as polyvictimized.

In study III the polyvictimization in adulthood (PVA) variable was created. Respondents who had been exposed to violence in adulthood or both in childhood and adulthood were included to this variable. Due to the small number of men, who had been exposed to all three forms of violence in adulthood, in contrast with study II, those exposed to two or three forms of violence were merged into one group and three groups were created: 1. no exposure in adulthood 2. exposure to one form 3. exposure to two or three forms, referred to as PVA.

#### **4.4. Statistical analysis**

The statistical software STATA 12.1 was used to compute all analyses (Stata-Corp, 2012).

##### *Study I*

Relative frequencies were used to describe socio-demographic background of the respondents. Differences between women exposed to SV and not exposed to SV were analysed using a chi-square test with a significance level of  $p < 0.05$ . Selected socio-demographic potential confounders (age, education, marital status, occupation, difficulties with paying bills) were entered into multivariable logistic regression analysis models to explore associations between SV exposure and risky health and sexual behaviours. Associations are presented as odds ratios (OR) and adjusted odds ratios (AOR) with 95% confidence intervals (CI 95%). Only respondents who had answered to all questions used in the model, were included in the multivariable logistic regression analysis.

##### *Study II*

Data were weighted by age and native language due to the relative oversampling of the younger population and lower response rate of Russian-speakers (Statistics

Estonia, 2013). Relative frequencies were used to describe socio-demographic characteristics for both weighted and unweighted samples. Chi-square test with a significance level of  $p < 0.05$  was used for examining the differences between socio-demographic characteristics in groups exposed and never exposed to violence and health outcomes according to number of exposures to different forms of violence. Row by row comparison was conducted using Holm-Bonferroni correction for multiple comparisons. Chi-square test for trend and logistic regression analysis was used to investigate the associations between health outcomes and exposure to violence. In logistic regression analysis age, native language, education, occupation, economic situation and marital status were used for adjusting. Only respondents who had answered to the questions used in the multinomial logistic regression analysis were included in the models.

### *Study III*

The data for both surveys was weighted by age group and native language (Statistics Estonia, 2013). To describe socio-demographic characteristics of the respondents and the prevalence of IV descriptive statistics were used. Chi-square test with a significance level of  $p < 0.01$  was used to analyse differences between men and women. Multinomial logistic regression analyses (adjusted for co-variables) were calculated for women and men separately to examine the associations between selected socio-demographic characteristics and PV. Respondents who did not answer some of the questions used in the multinomial logistic regression analysis were excluded from the models.

## **4.5. Ethics**

During the process of carrying out both surveys, ethical research principles were followed. Along with the invitation to join the survey, all potential respondents received a covering letter, where the purpose of the survey, use of acquired data, and contacts for obtaining additional information were provided. The anonymity of the respondents was guaranteed with the provided personal survey code, which was asked to return in a separate envelope and in case of electronically answering to the questionnaire, it was stored in a separate database. When filling the questionnaire, participants were free to choose to which questions to answer. In case they changed their mind, respondents were free to withdraw their participation at any time. In Estonia, anonymous questionnaire-based studies are not required to have the ethics committee approval. However, the EWHS was approved by the Research Ethics Committee of the University of Tartu, Estonia (226/T-7).



## 5. RESULTS

### 5.1. Socio-demographic characteristics of the respondents

In study I, selected socio-demographic characteristics according to exposure to SV were analysed. There were statistically significant differences between those exposed to SV and those who had not been exposed to SV in age, marital status, occupation and difficulties with paying bills. The proportion of women who had been exposed to SV was the highest among women who were in the oldest age group, were separated, divorced or widowed, did not currently work and had always or often difficulties with paying bills. There were no statistically significant differences in native language nor education.

In study II, the prevalence of different forms of IV by socio-demographic characteristics of the respondents were analysed. Similarly to study I, exposure to violence had statistically significant association with age, marital status and economic situation. Among women aged 35–44, who were separated, divorced, or widowed, had always or often difficulties with paying bills, the proportion of ever being exposed to violence was the highest. No statistically significant differences were found between women ever or never exposed to IV in native language, education, marital status, or occupation.

In Table 3, the weighted socio-demographic characteristics by gender of the respondents of study III are presented. Among men having higher education (24.7% vs. 42.6%) being married (27.2% vs. 31.8%) and having at least one or more children (43.6% vs. 59.4%) was less common compared to women. Men estimated their financial situation more often to be good or very good than women (16.7% vs. 10.0%). Among both men and women almost 98% reported to be exclusively or predominantly heterosexual.

**Table 3.** Weighted socio-demographic characteristics by gender, 18–44-year-old respondents in Estonia, %.

<b>Socio-demographic characteristics</b>	<b>Men</b> n=1244	<b>Women</b> n=1590
<b>Age</b>		
18–24	24.2	25.1
25–34	38.5	37.9
35–44	37.3	37.0
<b>Native language</b>		
Estonian	74.9	70.5
Russian or other	25.1	29.5
<b>Education</b>		
Primary education or less	13.7	15.6
Secondary or vocational secondary education	61.5	41.3
Higher education	24.7	42.6
Missing	0.1	0.5

<b>Socio-demographic characteristics</b>	<b>Men</b> n=1244	<b>Women</b> n=1590
<b>Education of mother</b>		
Unknown	4.8	2.0
Primary education or less/secondary education	62.2	66.6
Higher education	33.0	31.4
Missing	0.0	0.4
<b>Education of father</b>		
Unknown	11.7	9.5
Primary education or less/ Secondary education	60.1	65.5
Higher education	28.2	24.6
Missing	0.0	0.4
<b>Marital status</b>		
Married	27.2	31.8
Cohabiting	36.4	39.0
Single	32.0	23.9
Other	4.4	5.0
Missing	0.0	0.3
<b>Having one or more children</b>		
No	56.4	40.6
Yes	43.6	59.4
<b>Estimation on financial situation</b>		
Very good or good	16.7	10.0
Neither good nor bad	49.5	48.4
Very bad or bad	33.8	40.7
Missing	0.0	0.9
<b>Sexual orientation</b>		
Exclusively or predominantly heterosexual	97.7	97.6
Bi- or homosexual	2.0	1.7
Missing	0.3	0.7

## 5.2. The prevalence of interpersonal violence in Estonia

### 5.2.1. Age during exposure by the type of sexual violence

More than every fifth (22.7%) woman had been exposed to SV during their lifetime (Table 4). Nearly 10% had been exposed to rape or attempted rape.

**Table 4.** The prevalence of different forms of sexual violence (SV) according to the age during the exposure among women (n=1670) aged 18–44 years in Estonia.

Type of SV	SV with no genital contact	Sexual humiliation	SV with genital contact	Rape/ attempted rape	Total
No exposure	81.6	95.9	86.3	90.3	77.3
Only in childhood	10.8	2.7	7.6	3.9	12.3
Only in adulthood	5.8	0.8	4.4	4.6	8.1
Both in childhood and adulthood	1.5	0.4	1.4	0.7	2.2
Missing	0.3	0.1	0.4	0.5	0.0

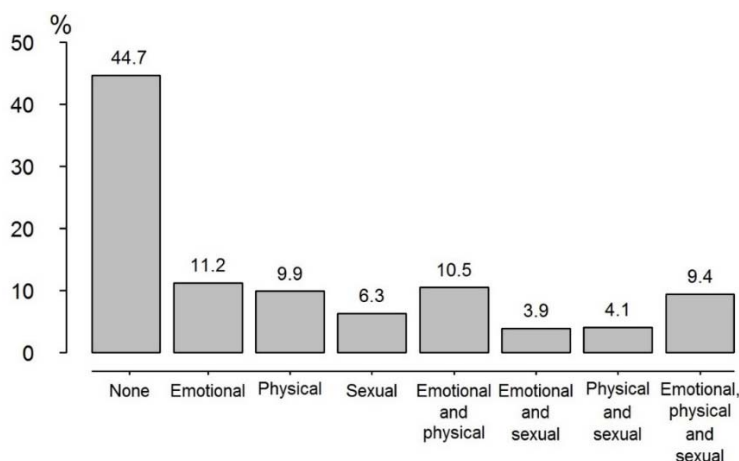
Over half of the respondents who had been exposed to SV had been exposed to it before the age of 18 (n=206). In Table 5 the life period (before the age of 18, being 18 years old or older, or both) during the exposure to SV is presented. It shows that most often women exposed to SV are under 18 years old, the only exception being rape/attempted rape. Across all four types of SV, around 10% of women had been exposed to it both in childhood and adulthood.

**Table 5.** The distribution of age during the exposure by the type of sexual violence (SV) among women aged 18–44 years in Estonia exposed to SV, *n* (%)

Type of SV	Only in childhood (n=206)	Only in adulthood (n=136)	Both in childhood and adulthood (n=37)	Total (n=379)
SV with no genital contact	180 (59.6)	97 (32.1)	25 (8.3)	302 (100)
Sexual humiliation	45 (68.2)	14 (21.2)	7 (10.6)	66 (100)
SV with genital contact	127 (57.0)	73 (32.7)	23 (10.3)	223 (100)
Rape/attempted rape	66 (43.1)	76 (49.7)	11 (7.2)	153 (100)

### 5.2.2. The prevalence of different forms of interpersonal violence and polyvictimization among women

Among the respondents, 55.3% had been exposed to at least one form of IV. In Figure 3 the distribution of exposure to different forms of IV and their combinations are presented. EV and its combination with PhV were most common, respectively 11.2% and 10.5%. Nearly every tenth woman had been exposed to all three forms of IV. Among the respondents, 27.9% were polyvictimized.



**Figure 3.** Weighted prevalence (%) of different forms of violence and their combinations, for 16–44-year-old women in Estonia.

### 5.2.3. The prevalence and patterns of interpersonal violence among men and women in childhood and adulthood

Among men two thirds (66.6%) and women over half (54.2%) had been exposed to at least one form of IV during lifetime.

As shown in Table 6, men were most often exposed to PhV (57.3%), followed by EV (35.4%) and SV (4.2%). Women were most often exposed to EV (34.1%) and PhV (33.4%), followed by SV (23.0%). The prevalence of PhV and SV among men and women was statistically different: men had been more often exposed to PhV and women to SV. Out of the three forms of violence, only the higher exposure to SV among women 12 months prior to the study was statistically significantly different among men and women (0.1% vs. 1.2%).

**Table 6.** Weighted prevalence of different forms of violence during lifetime and exposure to violence during 12 months prior to the survey by gender, 18–44-year-old respondents in Estonia, %.

Exposure to violence	Men	Women
	(n=1244) %	(n=1590) %
Prevalence		
Emotional violence	35.4	34.1
Physical violence*	57.3	33.4
Sexual violence*	4.2	23.0
Exposure to violence 12 months prior to the survey		
Emotional violence	5.7	7.3
Physical violence	5.7	4.8
Sexual violence*	0.1	1.2

\*p<0.05

In Table 7 the distribution of the combinations of different forms of IV in childhood, adulthood and both childhood and adulthood are presented. Among men, exposure to PhV alone (30.0%) and combination of PhV and EV (23.6%) were the most common. Exposure to SV among women was more common than among men across different life periods.

The combinations of different forms of IV were more common among women and combinations of different forms had more uniform distribution. Exposure to all three forms of IV among women was three times higher than among men. Among both men and women, exposure to IV only in childhood was the most common.

**Table 7.** Weighted prevalence of the combinations of different forms of violence during childhood, adulthood, both childhood and adulthood and lifetime exposure by gender, 18–44-year-old men (n=1244) and women (n=1590) in Estonia, %.

Exposure to interpersonal violence	Only in childhood*		Only in adulthood*		Both in childhood and adulthood*		Lifetime exposure*	
	Men %	Women %	Men %	Women %	Men %	Women %	Men %	Women %
No exposure to any form	52.7	61.6	78.0	78.1	82.5	90.8	33.4	45.8
Only emotional	14.5	12.3	2.8	4.5	3.5	4.1	8.8	10.8
Only physical	17.8	7.7	15.9	5.7	11.4	1.9	30.0	10.1
Only sexual	0.6	5.8	1.0	4.2	0.0	0.9	0.2	6.2
Emotional and physical	12.4	5.3	1.8	3.6	2.5	1.1	23.6	10.4
Emotional and sexual	0.8	2.7	0.0	1.4	0.0	0.4	0.4	3.8
Physical and sexual	0.5	2.0	0.2	1.1	0.0	0.2	1.0	3.8
Exposure to all three forms (emotional, physical and sexual)	0.7	2.7	0.2	1.4	0.1	0.6	2.8	9.1

\*Statistically significant differences between men and women according to chi-square analysis, p<0.01

### 5.3. Socio-demographic factors associated with exposure to one form of violence and polyvictimization in adulthood across gender

Among men, 28.9% were exposed to one studied form of violence and 5.8% to PVA, among women 17.9% and 12.4%, accordingly. Multinomial logistic regression analysis showed that exposure to violence in childhood and older age were associated with exposure to one form of IV and PVA across gender (Table 8).

**Table 8.** Adjusted odds ratios (AOR)\* with 95% confidence intervals for being exposed to one form of violence and polyvictimization in adulthood, 18–44-year-old respondents in Estonia.

Background characteristics	Men n=1239		Women n=1532	
	One form of violence in adulthood** n=360 (28.9%)	Polyvictimization in adulthood** n=72 (5.8%)	One form of violence in adulthood** n=285 (17.9%)	Polyvictimization in adulthood** n=197 (12.4%)
<b>Native language</b>				
Estonian	1.00	1.00	1.00	1.00
Russian/other	0.97 (0.72–1.32)	0.86 (0.48–1.56)	1.08 (0.82–1.42)	<b>1.45 (1.06–1.99)</b>
<b>Respondents education</b>				
Higher	1.00	1.00	1.00	1.00
Basic	1.42 (0.90–2.24)	1.22 (0.48–3.09)	1.36 (0.90–2.05)	<b>2.56 (1.57–4.18)</b>
Secondary	1.12 (0.82–1.54)	1.15 (0.60–2.21)	1.12 (0.86–1.47)	<b>2.01 (1.42–2.83)</b>
<b>Education of mother</b>				
Higher	1.00	1.00	1.00	1.00
Basic/ secondary	0.96 (0.70–1.30)	1.62 (0.83–3.17)	0.87 (0.65–1.16)	<b>1.58 (1.07–2.36)</b>
Unknown	1.53 (0.79–2.98)	<b>3.84 (1.17–12.60)</b>	1.63 (0.65–4.03)	<b>3.39 (1.33–8.65)</b>
<b>Education of father</b>				
Higher	1.00	1.00	1.00	1.00
Basic/ secondary	1.22 (0.88–1.68)	0.85 (0.44–1.63)	1.01 (0.74–1.39)	0.88 (0.59–1.33)
Unknown	1.40 (0.87–2.27)	0.86 (0.34–2.20)	0.78 (0.46–1.30)	0.72 (0.40–1.32)
<b>Marital status</b>				
Married	1.00	1.00	1.00	1.00
Single	1.29 (0.85–1.96)	1.87 (0.82–4.26)	1.29 (0.86–1.94)	<b>1.74 (1.07–2.82)</b>
Cohabiting	1.35 (0.95–1.92)	1.28 (0.63–2.58)	<b>1.65 (1.20–2.26)</b>	<b>1.97 (1.36–2.86)</b>
Divorced/widowed/other	1.59 (0.84–3.02)	1.86 (0.57–6.09)	<b>2.21 (1.30–3.77)</b>	<b>2.28 (1.25–4.16)</b>

Background characteristics	Men n=1239		Women n=1532	
	One form of violence in adulthood** n=360 (28.9%)	Polyvictimization in adulthood** n=72 (5.8%)	One form of violence in adulthood** n=285 (17.9%)	Polyvictimization in adulthood** n=197 (12.4%)
<b>Biological children</b>				
No	1.00	1.00	1.00	1.00
Yes	0.74 (0.53–1.04)	1.21 (0.61–2.42)	0.83 (0.59–1.17)	<b>1.75 (1.13–2.71)</b>
<b>Estimation of financial situation</b>				
Good/very good	1.00	1.00	1.00	1.00
Neither good nor bad	1.24 (0.93–1.65)	<b>2.24 (1.09–4.58)</b>	1.17 (0.90–1.51)	1.19 (0.84–1.66)
Bad/very bad	1.27 (0.86–1.88)	<b>4.16 (1.18–9.19)</b>	1.43 (0.92–2.20)	<b>3.26 (2.09–5.09)</b>
<b>Sexual orientation</b>				
Exclusively or predominantly heterosexual	1.00	1.00	1.00	1.00
Bi- or homosexual	0.33 (0.09–1.20)	2.51 (0.72–8.74)	0.63 (0.22–1.74)	1.76 (0.69–4.46)
<b>Exposure to violence in childhood</b>				
No	1.00	1.00	1.00	1.00
One form of violence in childhood	<b>2.18 (1.63–2.90)</b>	<b>3.77 (1.76–8.08)</b>	<b>1.86 (1.43–2.50)</b>	<b>2.23 (1.59–3.13)</b>
Polyvictimization in childhood	<b>2.26 (1.61–3.16)</b>	<b>11.50 (5.60–23.58)</b>	<b>3.09 (2.26–4.23)</b>	<b>3.38 (2.33–4.90)</b>
<b>Age</b>				
18–44	<b>1.05 (1.03–1.07)</b>	<b>1.05 (1.01–1.09)</b>	<b>1.05 (1.03–1.08)</b>	<b>1.05 (1.03–1.08)</b>

\* Adjusted for covariates

\*\* Reference category is “No exposure to violence during adulthood”

Among women additionally cohabiting and being divorced or widowed were positively associated with exposure to one form of violence in adulthood. Unknown education of mother, neither good nor bad or bad financial situation, exposure to violence in childhood and older age were associated with PVA among men. Exposure to PVA among women was positively associated with all covariates, except for education of father and sexual orientation.

## 5.4. Health and health behaviours associated with exposure to interpersonal violence

### 5.4.1. Exposure to sexual violence and risky health and sexual behaviours among women

As shown in Table 9, exposure to SV was positively associated with smoking, alcohol consumption, illicit drug use, having sexual intercourse for money or another material reward, having concurrent relationships, and being diagnosed with STIs. Contraception non-use was associated with exposure to SV only before the adjustment.

**Table 9.** The prevalence, odds ratios (OR) and adjusted odds ratios (AOR) of selected indicators of risky health and sexual behaviour associated with exposure to sexual violence (SV), for 18–44 years old women in Estonia

Risky health and sexual health behaviour	Total (n)	No exposure to SV n (% <sup>a</sup> )	Exposure to SV n (% <sup>b</sup> )	OR (95% CI)	AOR <sup>c</sup> (95% CI)
Smoking	1596	482 (39.1)	170 (47.0)	1.38 (1.09–1.75)	1.32 (1.03–1.70)
Alcohol consumption	1599	588 (47.6)	191 (52.5)	1.22 (0.96–1.54)	1.52 (1.18–1.95)
Illicit drug use	1596	303 (24.6)	137 (37.5)	1.85 (1.44–2.37)	2.21 (1.70–2.89)
Contraception non-use	1439	104 (9.5)	47 (13.9)	1.55 (1.07–2.24)	1.26 (0.86–1.85)
Sexual intercourse for money/ material reward	1601	12 (1.0)	18 (4.9)	5.27 (2.51–11.05)	3.51 (1.62–7.61)
Concurrent sexual relationships	1165	80 (9.0)	58 (21.1)	2.71 (1.87–3.92)	2.64 (1.80–3.86)
STIs	1485	190 (16.5)	94 (28.0)	1.96 (1.48–2.61)	1.48 (1.09–2.01)

<sup>a</sup> Percentage of risky health/sexual behaviour among all women with no exposure to SV

<sup>b</sup> Percentage of all risky health/sexual behaviour among women with exposure to SV

<sup>c</sup> Adjusted for age, marital status, education, occupation, and difficulties with paying bills



#### **5.4.2. Health outcomes according to number of exposures to interpersonal violence**

In Table 10, weighted crude and adjusted odds ratios of exposure to one to three forms of IV compared to no exposure for selected health outcomes. The results show consistent positive graded association between the number of exposures to different forms of IV and poor health outcomes. Women who had been exposed to all three forms of IV had the highest adjusted risk for all negative health outcomes included in the model. Women exposed to one or two forms of IV had also significantly higher adjusted risk for most of the negative health outcomes compared to women with no exposure, except for self-perceived health.

**Table 10.** Weighted crude (COR) and adjusted odds ratios (AOR) of exposure to one to three forms of violence compared to no exposure to interpersonal violence for selected health outcomes for 16–44 year-old women in Estonia

Health indicators	Total (n)	Exposure to one form of violence		Exposure to two forms of violence		Exposure to three forms of violence	
		COR	AOR	COR	AOR	COR	AOR
Poor self-perceived health*	2235	1.11 (0.47–2.59)	1.10 (0.46–2.63)	1.56 (0.70–3.44)	1.25 (0.52–3.05)	3.37 (1.46–7.79)	2.67 (1.08–6.63)
Daily activities limited due to chronic health problems**	2241	1.18 (0.81–1.71)	1.15 (0.79–1.89)	1.93 (1.31–2.82)	1.75 (1.19–2.60)	2.68 (1.69–4.26)	2.28 (1.42–3.67)
Depressive feelings**	2232	1.89 (1.28–2.78)	2.04 (1.36–3.05)	2.25 (1.47–3.43)	1.89 (1.20–2.97)	3.62 (2.21–5.92)	2.60 (1.52–4.46)
Dissatisfaction with life**	2237	1.71 (1.07–2.74)	1.54 (0.94–2.51)	1.84 (1.10–3.10)	1.22 (0.69–2.16)	3.80 (2.18–6.61)	2.01 (1.10–3.68)
Stress and worry due to sex life**	2212	1.56 (1.10–2.20)	1.49 (1.05–2.13)	1.40 (0.94–2.11)	1.32 (0.87–2.01)	2.93 (1.85–4.64)	2.76 (1.72–4.46)
Sexual dysfunction**	1804	1.52 (1.12–2.05)	1.46 (1.07–2.00)	1.37 (0.97–1.94)	1.29 (0.90–1.83)	2.35 (1.53–3.62)	2.19 (1.40–3.41)

\* Adjusted for age, native language, education, occupation, marital status, occupation, economic situation

\*\* Adjusted for age, native language, education, marital status, occupation, economic situation

## 6. DISCUSSION

To the best of the author's knowledge, IV as public health issue on population-basis among both men and women has not been investigated in such depth in Estonia or any other Post-Soviet country so far. The results of this work show a high prevalence of IV among both men and women, and the exposure to any form of IV was highest before the age of 18 across both genders. Although there were differences in socio-demographic factors associated with exposure to violence, exposure to violence in childhood was strongly associated with exposure to violence in adulthood among both men and women. Additionally, associations between IV with health and health behaviours showed a dose-dependent relationship between the number of exposures and poorer health outcomes.

### 6.1. Prevalence of emotional, physical, and sexual violence in Estonia

The high prevalence of IV found in this work is supported by previous research carried out in Estonia. In this survey over half of the women had been exposed to at least one form IV during their lifetime, which is comparable with the results of a survey carried out among pregnant women in six European countries, where 45.4% of women in Estonia reported exposure to IV, which was the highest prevalence among the six countries (Lukasse et al., 2014).

Nearly 23% of women in this survey had been exposed to SV, over half of the SV was reported taking place before the victim was 18 years old, which is similar to the 10% of women in Estonia exposed to SV before the age of 15 found in the FRA survey (European Union Agency for Fundamental Rights, 2014). Childhood and youth have been shown to be periods with a higher risk for being exposed to SV, with girls even at higher risk than boys, which corroborates with the findings of this survey (Aho, Proczkowska Bjorklund, & Svedin, 2016; Danielsson et al., 2009; Eriksen, Hansen, Javo, & Schei, 2015; Krug et al., 2002).

When comparing the lifetime exposure to IV among men living in Estonia in this study with a study carried out among men in Sweden, exposure to EV and PhV violence in Estonia was higher (35.4% vs. 16.7% and 57.3% vs. 48.9% accordingly), but prevalence of SV was similar in both countries (4.2% vs. 4.5%) (Swahnberg, 2011). Among women, the prevalence of exposure to EV and SV in Estonia was higher than in Sweden (34.1% vs. 21.4% and 23.0% vs. 16.9%), and the exposure to PhV was marginally lower (33.4% vs. 36.4%) (Swahnberg & Wijma, 2003). The studies used for comparison were carried out in Sweden in years 2003 and 2011 and used the same instrument to measure the exposure to violence. Although there is chronological difference in the time these studies were carried out, there is no reason to assume, that the prevalence of violence should have drastically increased in Sweden during that period. These differences can be associated with methodological differences to some extent, but it is

possible that they reflect the reality in which case it is very important to note, that although the countries are geographically close, the prevalence of phenomena like IV, which are affected by various cultural and societal norms, can be noticeably different. Taking into account that in contrast with Estonia, in Sweden IV is not a new topic neither in academic research nor in public awareness, and thus the overall knowledge and ability to recognize IV and report it are better, the differences in reality can be even bigger.

## **6.2. Patterns of exposure to interpersonal violence and polyvictimization in Estonia**

We found significant differences in the patterns of exposure to IV across gender. These findings are in accordance with previous studies carried out using the NorAQ and also Hamby's study arguing that studies where other types of questionnaires than behavioural checklists are used, show gender asymmetry (Hamby, 2014; Swahnberg, 2011; Swahnberg & Wijma, 2003). Men were most often exposed to isolated PhV, which is in accordance with previous research (Danielsson et al., 2009). In childhood and youth, boys receive more often corporal punishment from their parents or caregivers (Lansford et al., 2010; McKee et al., 2007). In Estonia, although physical punishment is forbidden by the law, a third of parents are not aware of it and approximately 20% of parents use it for disciplining their child (Anniste, Biin, Osila, Koppel, & Aaben, 2018). At school, both boys and girls are exposed to bullying at similar levels, however among boys pushing and hitting are more common and girls are more exposed to emotional bullying (Mark, Sisask, Vaikma, Värnik, & Värnik, 2015). Men are also more often shown to be victims of conventional crime (Aho, Gren-Landell, et al., 2016). Among women combinations of different forms of violence were more common and exposure to all three forms of violence was more common among women in childhood, adulthood and both in childhood and adulthood, which is supported also by previous research (Danielsson et al., 2009; Nybergh et al., 2013). Although due to the design of the NorAQ it was not possible to analyse the perpetrator of violence, one of the possible explanations is that among women there are higher levels of exposure to the most severe form of IPV, intimate terrorism, which involves all these forms of violence (Ansara & Hindin, 2010; M. P. Johnson, 2011). In a Swedish study among youth, the perpetrator of EV and PhV among young men was more often a stranger and among young women a partner, ex-partner or a parent, the most frequent perpetrator of SV was a stranger or schoolmate/friend (Danielsson et al., 2009). Previous research also supports the finding of prominent differences in exposure to SV both in childhood and adulthood among men and women, suggesting that women are at higher risk for being exposed to SV than men (Aho, Gren-Landell, et al., 2016; Eriksen et al., 2015; Glass et al., 2003; Krug et al., 2002; Smith et al., 2017).

During 12 months prior to the survey, women had been more often exposed to EV (7.3% vs. 5.7% among men) and SV (1.2% and 0.1% accordingly), but less to PhV (4.8% and 5.7% accordingly), however only the difference in the prevalence of SV was statistically significant. The patterns of exposure to violence during the last 12 months were similar to previous studies which have focused on IPV, however the exposure rates in this survey were lower (Heiskanen & Ruuskanen, 2011; Nybergh et al., 2013). In the NISVS in the U.S., where SV by any perpetrator was asked, 1.2% of women and 0.2% of men were raped during the last 12 months (Smith et al., 2017).

### **6.3. Socio-demographic characteristics associated with exposure to interpersonal violence**

In this study, out of the analysed socio-demographic characteristics, belonging to the oldest age group, being separated, divorced, or widowed and having difficulties with paying bills were associated with exposure to violence during lifetime among women. In this study, no difference emerged between Estonian- and Russian-speaking groups in exposure to violence, with the exception of PVA among women. From previous research carried out in Estonia, it is known that attitudes and knowledge regarding violence between these two groups are different. Among Russian-speakers victim-blaming attitudes are more common and violent acts are less often recognized (Eesti Seksuaaltervise Liit, 2014). For example, 31% of Estonians agreed with the statement “A person who consumed alcohol prior to being raped, is to some extent responsible for what happened”, among non-Estonians 56% agreed with the statement. Therefore, this result may reflect the reality, but it is possible, that the self-reported prevalence may be affected by recognizing violence and readiness to report it in a survey.

Investigating associations between selected background characteristics and exposure to violence in adulthood among men and women we found that across gender exposure to violence in childhood had a graded relationship with exposure to violence in adulthood. Findings supporting this result have been reported in previous surveys. A study carried out in Canada showed that ACEs predicted IPV among women, but PV was related to IPV beyond the effects of specific form of maltreatment (Brassard et al., 2019). Multiple exposures to violence in childhood have been found to be the most potent risk factor for SV in adulthood among women (Öberg, Skalkidou, Heimer, & Lucas, 2020). There are multiple mechanisms through which this is thought to happen. PV in childhood has been associated with having a lack of positive relational models, overall poor developmental environment which can lead to difficulties with recognizing risky situations and poor partner choices (Brassard et al., 2019). Also reduced capacity for affect regulation and higher dysfunctional avoidance patterns leading to repeated exposure to violence have been shown (Briere, Hodges, & Godbout, 2010; Dugal, Godbout, Bélanger, Hébert, & Goulet, 2018). In this study older age was also

associated with higher risk for exposure to violence in adulthood across gender. This result was expected as although younger age in itself is a risk factor for violence, violent experiences tend to accumulate during lifetime, as possible exposure time increases (World Health Organization and London School of Hygiene and Tropical Medicine, 2010). Both childhood and adolescence have been associated with higher risk for violence exposure in previous research (Finkelhor et al., 2007a, 2007b). Some forms of SV being closely associated with young age, such as dating violence, violence taking place in schools and universities (Krug et al., 2002). In a recent survey carried out in Estonia among youth aged 16–26 years, the median age of first exposure to sexual abuse was 15.7 years and 17% reported being exposed to sexual abuse before the age of 13 years. In every tenth case, abuse took place at the victim's home (Hillep & Pärnamets, 2020).

Exposure to PVA was associated with poor financial situation. There is evidence showing that exposure to violence in adolescence is associated with poorer educational attainment and lower income in adulthood (Covey, Menard, & Franzese, 2013). However, violent experiences have also been shown to affect the ability of a person to keep a long-term job (Crowne et al., 2011). Having lower-income and/or financial problem may also cause a person to move to unsafe neighbourhood or earn money in ways which increase their risk for exposure to violence (R. Campbell et al., 2003). Lower education of mother was associated with PVA among both men and women, while the education of father was not. In Estonia until quite recently, gender stereotypic distribution unpaid work at home has been common, including mother being responsible for the majority of the childrearing (Järvpõld & Lunev, 2015). This means that mothers spend more time with children, which could explain to some extent these findings. Lower or unknown education of mother can also be a proxy for belonging to lower socio-economic group with fewer resources and less knowledgeable childrearing practices. Non-Estonian ethnicity, lower education, non-married status, and having one or more children were factors that were associated with PVA only among women. Among women, more associations between background characteristics and exposure to violence were found, which shows that for women socio-demographic background plays a much bigger role in exposure to violence.

#### **6.4. Associations between interpersonal violence, health and risky health and sexual behaviours**

Our findings demonstrate that women exposed to SV were more likely to engage in risky health behaviours, such as smoking, alcohol consumption and illicit drug use. They also engaged more in risky sexual behaviours, such as contraception non-use, having sexual intercourse for money or other material rewards, having concurrent sexual relationships, and being diagnosed with STIs. Substance abuse has been associated with the wish to reduce the symptoms of psychological distress, as exposure to SV has been associated with increased levels of fear,

anxiety, depression and PTSD (Resnick, Acierno, & Kilpatrick, 1997). This in turn can lead to risky sexual behaviour through impaired judgement and decreased risk negotiation abilities (N. L. Johnson & Johnson, 2013; Wells et al., 2015). Being under influence of alcohol or drugs also makes a person more vulnerable to (re)victimization, as it makes more difficult to protect oneself, it impairs the ability to detect dangerous situations and intoxicated person may be seen as vulnerable by potential assailants (Champion et al., 2004; Jina & Thomas, 2013; Larsen, 2015). Risky sexual behaviours have been also interpreted as a way of affect regulation or regaining control over their bodies (R. Campbell et al., 2003; Littleton, Grills-Taquechel, Buck, Rosman, & Dodd, 2013). Being exposed to SV has been shown to increase the risk for overall neglect of one's health and avoidance of thinking about the possible negative consequences of one's behaviour (Hillis, Anda, Felitti, & Marchbanks, 2001; Resnick et al., 1997; Wells et al., 2015), like contraception non-use seen in this study.

Women who had been exposed to all three forms of violence, had the highest relative odds for poor self-perceived health, limited daily activities due to chronic health problems, having depressive feelings, being dissatisfied with life, having stress and worry due to sex life and having at least 3 symptoms of sexual dysfunction. These findings are in accordance with previous surveys, which have suggested that the number of exposures to different forms of violence accounts for a significant proportion of symptomatology, in some cases even eliminating the association between individual victimization and symptoms (Finkelhor et al., 2007b; Richmond, Elliott, Pierce, & Alexander, 2009). However, there is evidence, that some forms of victimization, like SV in childhood, may be particularly traumatic and even and independently contribute to the trauma symptoms over and above PV (Finkelhor et al., 2007b).

Previous surveys carried out in Sweden, which also have used the NorAQ instrument, have found associations between health and exposure to violence in accordance with this study. Davidsson et al. showed that women who had been exposed to SV reported more often poor health, among those who had in addition been exposed to EV and PV, the association was even stronger (Davidsson, Benjaminsson, Wijma, & Swahnberg, 2009). Lukasse et al. demonstrated that women who had been exposed to more than one form of violence, reported higher levels of current suffering due to violence (Lukasse et al., 2014). And lastly, Simmons et al. provided evidence that both among men and women exposure to PV is associated with higher levels of mental illnesses (Simmons et al., 2015). However, to the best of the author's knowledge, this study is the first to provide evidence that among women lifetime PV is associated with greater stress and worry due to sex life and sexual dysfunction. Among women exposed to IPV, altered brain activation and pain response have been found (Strigo et al., 2010), which can also explain the differences in self-perceived health and sexual dysfunction levels in this study.

## 6.5. Strengths and limitations

The main strengths of this research were as follows:

1. Based on two population-based surveys, the samples were representative and had no selectivity bias. The response rates (47% in EWHS and 44.5% in EMS) were within the range, which was anticipated when power calculations for the surveys were carried out. Thus, the results of these surveys can be generalized to the population of Estonia.
2. NorAQ is an internationally used and validated instrument with good sensitivity and specificity. Using the NorAQ makes enables to compare the results of this research with other countries, where the same instrument has been used.
3. NorAQ was translated into Estonian and Russian by native-speakers and then translated back into source language. The original and back-translated versions were used to determine the final consensus version of the questionnaire.
4. Taking into account the sensitivity of the questions concerning exposure to violence, the questions were filled out rather well. Over 95% among both men and women answered to the questions concerning lifetime exposure to violence.
5. The first population-based research on the prevalence of different forms of IV and PV among both men and women in Estonia.

The main limitations of the research were as follows:

1. Due to the cross-sectional study design it is not possible to determine whether risky health behaviours followed of preceded exposure to violence. Based on previous research we can only presume, that risky behaviours followed exposure to violence. There is a need to carry out longitudinal studies to determine the causal relationship.
2. There can be recall bias as the questions were about lifetime exposure to violence, which means that some events could have taken place a long time ago. It is possible, that less severe violent events, which happened years ago could have been less precisely reported.
3. The NorAQ asks questions about emotional, physical, and SV, but some forms of violence, for example witnessing violent events, experiencing economic violence or being a victim of human trafficking are not included to the questionnaire. In addition to that, the questionnaire does not provide information about the duration of the violent acts. The questionnaire did not ask questions about the perpetrator of lifetime violence. Information about perpetrator could have made possible analysing more in-depth the possible reasons behind different patterns of violence exposure among men and women.
4. Although the response rates were in the margins expected, it is possible that most highly victimized persons were not able to respond to the questionnaire. As it is known, that for example women, who are victims of intimate terrorism have few aspects of their life which are not strictly controlled by their partners and answering to the questionnaire could have been forbidden by the partner or avoided by woman herself in fear of the possible consequences. Additionally,



due to the stigma attached to being victimized, especially among men, it is possible, that the prevalence presented here is an underestimate.

5. All questions about health are self-reported and not designed to give an in-depth understanding of the health condition, but rather an overview. In case of some questions, e.g., having daily activities limited due to chronic diseases, the design of the questionnaire did not allow to analyse the disability level caused by the disease, neither the type of disease which was causing it.
6. Some studied sub-groups were small. For example, women who agreed to have sex for money or other material reward. This can lead to less precise estimates.

## 7. CONCLUSIONS

1. Among women in Estonia, 22.7% had been exposed to sexual violence. Exposure to sexual violence was associated with smoking, alcohol consumption, illicit drug use, contraception non-use, having sexual intercourse for money/material reward, concurrent sexual relationships and being diagnosed with sexually transmitted infections.
2. The majority of the women (55.3%) had been exposed to at least one form of interpersonal violence and 27.9% had been polyvictimized. Exposure to violence had a dose-response relationship with poor self-perceived health, limited daily activities due to chronic health problems, having symptoms of depression, being dissatisfied with life, having stress and worry due to sex life and having at least 3 symptoms of sexual dysfunction.
3. Over half of the respondents among both men (66.6%) and women (54.2%) reported being exposed to at least one form of violence during lifetime. Across gender, the majority of the violence took place before the age of 18. The patterns of exposure however were significantly different across gender. Men were more commonly exposed to physical violence alone and women more to polyvictimization. Women were also significantly more often exposed to sexual violence. Across gender, low or unknown education of mother, poor or neutral financial situation, exposure to violence in childhood and older age were associated with polyvictimization in adulthood. Among women additionally non-Estonian native language, basic or secondary education, not being married and having biological children were associated with polyvictimization in adulthood.

In conclusion, exposure to interpersonal violence was common across gender and most commonly took place in childhood. However, the patterns and background characteristics associated with exposure to interpersonal violence were different among men and women. Exposure to violence was associated a variety of negative health effects, which were dose dependent.

## 8. MAIN PRACTICAL IMPLICATIONS

1. The results of this work show that primary prevention of violence in childhood is of utmost importance. Introducing the topic of violence into the mandatory school curricula has been an excellent example of primary prevention, as are the anti-bullying programs starting already in the kindergarten. The full effect of these interventions can be seen in the following years and decades, thus they must be continued. As the majority of violence against children is perpetrated by someone they know, more effective systems for early detection of high-risk families should be put in place. Positive parenting programs to teach families better parenting skills have been shown to be effective in violence prevention.
2. Acknowledging the different patterns of violence and background characteristics associated with exposure across gender can be used to design evidence-based prevention and intervention strategies to decrease negative health outcomes and risky behaviours shown to be associated with exposure to violence. Promoting gender equality and reducing harmful gender stereotypes should start already at an early age.
3. Being aware of the negative health consequences associated with exposure to violence is essential for healthcare providers, as they play a major role in the secondary prevention of violence. One of the best ways to ensure that all healthcare workers have at least basic knowledge about this topic is to include it into the mandatory curriculum of all future medical professionals. Best possible screening approaches in different clinical settings should be discussed and implemented so that the healthcare providers would have a clear understanding of the best ways how to approach and help such patients. Providing the best possible care to the violence survivors, free of judgement and prejudice is essential to prevent violence from reoccurring. Healthcare providers in turn have to be supported by the wider healthcare system to have enough time, a supporting environment and efficient referral systems in place. In addition to that, this work provides further evidence about the necessity of the specialized sexual assault centres, which were created in 2016 in Estonia.
4. Person-centred multidisciplinary cooperation is needed in order to get a more comprehensive picture of the circumstances and needs of the victim. Working in silos can cause fragmentation of information and lead to unnecessary delays or even not providing the services the person needs. All different instances working with violence survivors should be aware about the ways how exposure to violence can affect health and health behaviours.

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## APPENDIX

The questionnaire of the survey Estonian Women's Health 2014: sexual and reproductive health, health behaviour, attitudes and use of healthcare services

### Background information

1. What is your age in years \_\_\_\_\_
2. What is your marital status?
  1. married
  2. cohabiting
  3. divorced
  4. separated
  5. widow
  6. single
3. What is your native language?
  1. Estonian
  2. Russian
  3. other (please specify) \_\_\_\_\_
4. What county do you live in?

1 Harjumaa	6 Läänemaa	11 Saaremaa
2 Hiiumaa	7 Lääne-Virumaa	12 Tartumaa
3 Ida-Virumaa	8 Põlvamaa	13 Valgamaa
4 Jõgevamaa	9 Pärnumaa	14 Viljandimaa
5 Järvamaa	10 Raplamaa	15 Võrumaa
5. Where do you live?
  1. Tallinn, Tartu, Pärnu, Kohtla-Järve or Narva
  2. other town or urban settlement
  3. rural area
6. What is the highest level of education you have completed?
  1. basic/less
  2. secondary, vocational secondary
  3. vocational higher
  4. university (bachelor's degree)
  5. postgraduate degree (master's or doctoral degree)
7. If you are currently studying, then at what level of education? *If you are not studying then please **move on to question 8**.*
  1. basic
  2. secondary,
  3. vocational secondary
  4. vocational higher
  5. university (bachelor's degree)
  6. postgraduate degree (master's or doctoral degree)
8. What best describes your current status?
  1. employed
  2. unemployed
  3. at home
  4. pupil / student
  5. on maternity or parental leave
  6. other (*please specify*) \_\_\_\_\_

9. What is your average monthly net income (average of income from all sources after the deduction of all national taxes) during the last 12 months?
  1. I have no income
  2. up to 200 euros
  3. 201–300 euros
  4. 301–450 euros
  5. 451–600 euros
  6. 601–700 euros
  7. 701–900 euros
  8. 901–1000 euros
  9. 1001–1500 euros
  10. 1501–2000 euros
  11. over 2000 euros
10. How many people live in your household (including yourself)? *Please write a number* \_\_\_\_\_
11. What was the average monthly net income (average of income from all sources after the deduction of all national taxes) of your household during the last 12 months?
  1. up to 200 euros
  2. 201 – 450 euros
  3. 451 – 700 euros
  4. 701 – 950 euros
  5. 951 – 1200 euros
  6. 1201 – 1450 euros
  7. 1451 – 1700 euros
  8. 1701 – 1950 euros
  9. 1951 – 2200 euros
  10. 2201 – 2451 euros
  11. over 2451 euros
  12. I do not know
12. Do you have difficulties paying your bills (household expenses, electricity, heating, telephone, loan, leasing, etc)?
  1. all the time
  2. often
  3. sometimes
  4. rarely
  5. never
13. How do you rate your financial situation?
  1. very good
  2. good
  3. not good or bad
  4. bad
  5. very bad
14. What is/was your mother's level of education?
  1. basic/less
  2. secondary, vocational secondary
  3. higher/vocational higher
  4. don't know

15. What is/was your father's level of education?
1. basic/less
  2. secondary, vocational secondary
  3. higher/vocational higher
  4. don't know

INTIMATE RELATIONSHIPS AND SEXUALITY

16. In your childhood home, did your parents/guardians discuss sexuality related topics with their children?
1. yes, even too much
  2. yes, sufficiently
  3. yes, but too little
  4. no, but I would have wished it
  5. no, but I would not have wished it
17. Were sexuality related topics discussed at school?
1. yes, even too much
  2. yes, sufficiently
  3. yes, but too little
  4. no, but I would have wished it
  5. no, but I would not have wished it
18. Have you ever had the following sexual experiences? (*please answer every question by encircling your response*)

	yes	no
masturbation	1	2
kissing on the lips	1	2
petting (touching/caressing each other)	1	2
vaginal intercourse	1	2
oral sex	1	2
anal sex	1	2
group sex (sex with more than one partner at the same time)	1	2

19. Have you masturbated during the last month?
1. yes
  2. no
20. At what age did you have sexual intercourse for the first time?
1. \_\_\_\_\_ years old
  2. I have not experienced intercourse
21. How old was your first sexual intercourse partner?
1. \_\_\_\_\_ years old
  2. don't know
22. Which of the following statements best describes your first sexual intercourse partner?
1. I had just met him
  2. we knew each other earlier, but were not dating
  3. we had a steady relationship

23. Thinking back to your first sexual intercourse, how much did you yourself wish to have intercourse?
1. very much
  2. to a certain extent
  3. I did not, but agreed after persuasion
  4. I did not, but others (not my partner) pressured me
  5. I did not, but my partner pressured me
  6. I did not, but my partner forced me to with threats
  7. I did not, but my partner forced me to physically
24. Who was the initiator of your first sexual intercourse?
1. I was more the initiator
  2. both of us equally
  3. my partner more
  4. I don't know
25. How many sexual intercourse partners have you ever had? \_\_\_\_\_ partners
26. How many sexual intercourse partners have you had (even if it was only once) during the last year? \_\_\_\_\_ partners.
27. When was the last time you had sexual intercourse?
1. during the last month
  2. 1–3 months ago
  3. 4–11 months ago
  4. 1–2 years ago
  5. 3–10 years ago
  6. over 10 years ago
28. How many times on average did you have sexual intercourse during the last year (12 months)?
1. I have not had sexual intercourse during the last year (12 months) (*please jump to question 37*)
  2. less than once a month
  3. once a month
  4. 2–3 times a months
  5. once a week
  6. 2–3 times a week
  7. 4–6 times a week
  8. once a day or more
29. If you are married or cohabiting then how long has your relationship with your present partner lasted? *please also count the period before cohabiting or marriage*
1. up to 6 months
  2. 7–12 months
  3. 1–2 years
  4. 3–5 years
  5. 6–10 years
  6. 11–15 years
  7. more than 15 years
  8. I am not currently married or cohabiting
30. Talking about sexual life with your current partner is:
1. very easy
  2. fairly easy

3. neither difficult nor easy
  4. fairly difficult
  5. very difficult
  6. I do not have a partner
31. Have you had parallel sexual relationships during the present marriage/cohabitation?
1. no
  2. yes, casual
  3. yes, steady
  4. yes, casual and steady
  5. I am not married/cohabiting at the moment
32. Have you experienced the following situations in the last year (12 months) during at least three months? (*please answer every question by encircling your response*)

	YES	NO
lacked interest in having sex	1	2
lacked enjoyment in sex	1	2
felt anxious during sex	1	2
felt physical pain during or after sex in the genital region (vaginal opening, vagina, lower abdomen)	1	2
felt no excitement or arousal during sex	1	2
did not reach a climax or took a long time to reach a climax despite feeling excited/aroused	1	2
had an uncomfortably dry vagina	1	2
I did not experience any of these	1	2

The questions in the following section concern those who have had sexual intercourse during the past year (12 months) AND were married or cohabiting during the same period.

*Other respondents please jump to question 37.*

Thinking back to the last year (12 months), how much do you agree or disagree with the following statements.

33. “My partner and I share the same level of interest in having sex”
1. Agree strongly
  2. Agree
  3. Neither agree nor disagree
  4. Disagree
  5. Disagree strongly
34. “My partner and I share the same sexual likes and dislikes (things/activities/situations)”
1. Agree strongly
  2. Agree
  3. Neither agree nor disagree
  4. Disagree
  5. Disagree strongly
35. “My partner has experienced sexual difficulties in the last year”
1. Agree strongly
  2. Agree

3. Neither agree nor disagree
  4. Disagree
  5. Disagree strongly
36. "I feel emotionally close to my partner when we have sex together"
1. Always
  2. Most of the time
  3. Sometimes
  4. Not very often
  5. Hardly ever

*All respondents continue from here*

The next questions are about your sexual thoughts, sexual feelings, sexual activity and sexual relationships.

Thinking about your sex life in the last year, how much do you agree or disagree with the following statements:

37. "I feel satisfied with my sex life" *When answering please think back to the last year (12 months)*
1. Agree strongly
  2. Agree
  3. Neither agree nor disagree
  4. Disagree
  5. Disagree strongly
38. "I feel distressed and worried about my sex life." *When answering please think back to the last year (12 months)*
1. Agree strongly
  2. Agree
  3. Neither agree nor disagree
  4. Disagree
  5. Disagree strongly
39. "I have avoided sex because of sexual difficulties, either my own or those of my partner" *When answering please think back to the last year (12 months)*
1. Agree strongly
  2. Agree
  3. Neither agree nor disagree
  4. Disagree
  5. Disagree strongly
40. Have you ever felt the need/wish to seek help or advice regarding your sex life?
1. Yes
  2. No
41. From which of the following sources have you sought help or advice regarding your sex life in the last year (12 months)? *You can choose more than one answer.*
1. GP / family doktor
  2. Gynaecologist
  3. Midwife/nurse
  4. STI doctor
  5. Psychiatrist or psychologist
  6. Relationship counsellor

7. Sexologist
  8. Youth counsellor
  9. Alternative medicine practitioner (acupuncture, homeopathy, etc)
  10. Other (*please specify*) \_\_\_\_\_
  11. Have not sought any help
42. Sometimes people feel sexual attraction towards the same gender. At the moment your sexual attraction is directed:
1. only to men
  2. mostly to men
  3. equally to men and women
  4. mostly to women
  5. only to women
43. Have you ever had sexual experiences (sexual intercourse, petting) with someone of the same gender?
1. no
  2. yes, once
  3. yes, several times
44. Have you been asked to have sex in exchange for money or any other material reward?
1. No
  2. Yes, but I have refused
  3. Yes and I have agreed on one occasion
  4. Yes and I have agreed on several occasions
45. The following are statements about which people have different views. *For every statement, please encircling the answer that best describes your views.*

	agree strongly	agree	neither agree or disagree	disagree	disagree strongly
We should be tolerant of a man's unfaithfulness in a steady relationship	1	2	3	4	5
At the beginning of a relationship the woman must wait until the man initiates sexual intercourse	1	2	3	4	5
Women are equally free to propose marriage as men are.	1	2	3	4	5
Having many sexual partners gives a woman a bad reputation	1	2	3	4	5
A woman must have the legal right to terminate her pregnancy	1	2	3	4	5
Sexual violence in marriage or cohabitation must be punishable in law	1	2	3	4	5
Homosexual men and women must be free to live their lives as they wish.	1	2	3	4	5
A satisfying sexual relationship is very important for a happy close relationship	1	2	3	4	5

46. In your opinion can a woman refuse to have sexual intercourse in the following situations? For every statement, please encircling the answer that best describes your views.

	Yes	No
She has recently given birth		
She suspects or knows that her partner is HIV positive or has a sexually transmitted disease.		
Her partner or husband is physically abusive		
Her partner or husband is drunk		
Her partner or husband is in a parallel sexual relationship		
She is tired		
She does not wish to have sex		

### PREGNANCY AND CHILDREN

47. Are you pregnant at the moment?  
 1. Yes  
 2. No  
 3. Don't know
48. Have you been pregnant before?  
 1. Yes (how many times?) \_\_\_\_\_  
 2. No (*please jump to question 53.*)
49. What was the outcome of those pregnancies
- Birth  
 1. Yes (*How many times*) \_\_\_\_\_  
 2. No
- Miscarriage  
 1. Yes (*How many times*) \_\_\_\_\_  
 2. No
- Abortion  
 1. Yes (*How many times*) \_\_\_\_\_  
 2. No
- Ectopic pregnancy  
 1. Yes (*How many times*) \_\_\_\_\_  
 2. No

50.

	1 <sup>st</sup> child	2 <sup>nd</sup> child	3 <sup>rd</sup> child	4 <sup>th</sup> child	5 <sup>th</sup> child	6 <sup>th</sup> child	7 <sup>th</sup> child	8 <sup>th</sup> child	9 <sup>th</sup> child	10 <sup>th</sup> child
Year of birth										
The child was ( <i>encircle the the number corresponding to your answer</i> )										
born alive										
stillborn										



Did you live together with the child's father at the time of birth ( <i>encircle the number corresponding to your answer</i> )																			
Yes																			
No																			
Was the father of the child present at the child's birth?																			
Yes																			
No																			

51. How long did you breastfeed your last child (*count also non-exclusive breastfeeding*)?
1. not at all
  2. less than 1 month
  3. \_\_\_\_\_ months
  4. I am breastfeeding at the moment and have done so for \_\_\_\_\_ months
52. Who looked/looks after your last pre-school aged child, when you were/are working? (*you can choose several alternatives*)
1. I am not/was not working, I am/was at home with the child
  2. the father is/was at home with the child
  3. grandparents
  4. other relatives
  5. the child goes/went to a state nursery
  6. the child goes/went to a private nursery
  7. a paid nanny
  8. other (*please specify*) \_\_\_\_\_

## HEALTH SERVICES

⇒ *All respondents continue here.*

The following questions are about gynaecologist visits.

53. At what age did you first visit a gynaecologist?
1. \_\_\_\_\_ years
  2. I have never visited a gynaecologist (*please proceed to question 57.*)
  3. I don't remember
54. How do you rate your first visit to a gynaecologist?
1. very positive experience
  2. fairly positive experience
  3. fairly negative experience
  4. very negative experience
  5. I don't know
55. How often have you visited a gynaecologist during the past five years?
1. not at all (*please proceed to question 57.*)
  2. once
  3. more than once
56. Evaluate how satisfied you were with your most recent visit to a gynaecologist? (*Please answer every question by encircling the number corresponding to your response*)

	very satisfied	fairly satisfied	neither satisfied nor dissatisfied	fairly dissatisfied	very dissatisfied
1 friendliness	1	2	3	4	5
2 competence	1	2	3	4	5
3 reliability	1	2	3	4	5
4 length of the visit	1	2	3	4	5

All respondents continue here.

57. Have you experienced any of the following problems when making a gynaecologist appointment during the past five years? *You may choose several answers.*

1. I have not had any problems making a gynaecologist appointment
2. The waiting list for an appointment was very long
3. The procedure for making an appointment was complicated
4. The gynaecologist is located a long way away from where I live and/or the transport connection is bad
5. Economic barriers (the appointment fee, transport, etc is expensive)
6. I do not have national health insurance
7. Other problems (*what?*) \_\_\_\_\_
8. I have not needed to visit a gynaecologist

58. Have you undergone any of the following examinations? *Please answer every question by encircling the number corresponding to your response.*

	During last 5 years	Earlier	Never	Don't know/ don't remember
Gynaecological examination				
PAP smear (oncocytology)				
Breast examination (doctor)				
Mammography (breast X-ray examination) or ultrasound examination				

The following questions are about termination of pregnancy on your own request. If you have never had an abortion, then please proceed to question 67.

If you have had more than one abortion, then please give your answers about the most recent one.

59. When did your most recent abortion take place?

1. Less than a year ago
2. 1–5 years ago
3. 6–10 years ago
4. 11–20 years ago
5. More than 20 years ago

60. With what method was your most recent abortion performed?
1. Surgical method
  2. Medical method (pills)
  3. Other method (*please specify*) \_\_\_\_\_

61. Indicate your satisfaction with the information you received from the doctor/nurse before your most recent abortion about the following topics (*Please answer every question by encircling the number corresponding to your response*):

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly unsatisfied	Very unsatisfied
Abortion procedure					
Possible psychological influences					
Possible medical risks and complications					

62. Did you receive counselling about contraception before/after the abortion?
1. yes, before
  2. yes, after
  3. yes, both before and after
  4. no
  5. I don't remember
63. Were you satisfied with the way you were treated in the hospital/clinic during your most recent abortion?
1. very satisfied
  2. fairly satisfied
  3. neither satisfied nor dissatisfied
  4. fairly dissatisfied
  5. very dissatisfied
64. What were the reasons for your decision to have an abortion? (you can choose several responses)
1. I was not ready to take the responsibility for raising a child
  2. I didn't want to raise a child alone
  3. I didn't want to jeopardise my relationship/family unity with the birth of another child
  4. My couple relationship was unstable/problematic
  5. My partner was abusive
  6. I didn't want to have a child with this particular partner
  7. I gave up this pregnancy because of pressure from my partner
  8. I gave up this pregnancy because of pressure from my parents
  9. For economic reasons
  10. My living space was too small/unsuitable and i was not able to obtain a larger one
  11. I was in the middle of my studies
  12. Work didn't allow it
  13. I was not mature enough to be a mother
  14. I was too young
  15. I had nobody who would have helped me to take care of the child
  16. I didn't have time for the child
  17. Other (please specify) \_\_\_\_\_

65. Did you discuss your most recent abortion beforehand with your partner?  
 1. Yes  
 2. No
66. Did your partner agree with the decision to terminate the pregnancy?  
 1. Completely agreed  
 2. Agreed  
 3. Neither agreed nor disagreed  
 4. Disagreed  
 5. Completely disagreed  
 6. I don't know

⇒ **All respondents continue here.**

The following questions are about infertility and infertility treatment.

67. Have you had any periods when, during one year (12 months), you have had difficulties in getting pregnant although you were having regular sexual intercourse?  
 1. Yes  
 2. No (*go to question 77*)
68. Did you succeed in giving birth to a child following this period of infertility?  
 1. Yes  
 2. No
69. Have you ever sought help from a doctor concerning your infertility?  
 1. Yes (*please proceed to question 71*)  
 2. No
70. If you haven't sought medical help for your infertility, what is the reason for this?  
*(you can choose several answers)*

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree
I got pregnant					
I still want/wanted to wait and try to become pregnant naturally					
I don't/didn't want medical interference					
I haven't been aware what treatments for infertility are available					
I am too old to get treatment					
Investigations and treatment are too expensive					
Hospitals and infertility clinics are too far away					

It is difficult to get an appointment to the specialist					
My partner does not want to come for the investigations or treatment					
My relationship came to an end					
I was ashamed to approach a specialist with that problem					
I do not have Estonian national health insurance					
Other (please specify)					

71. Have you been treated for infertility?

1. Yes, most recently in \_\_\_\_\_ (year)
2. No (*please proceed to question 76*)

72. What treatments have you received for infertility? *Please answer every question by encircling the number corresponding to your response.*

	Yes	No
Hormonal treatment		
Insemination (IUI, sperm is placed in the uterus)		
In vitro fertilization (IVF/ICSI/IVF with cryopreserved embryos)		
Other (incl. alternative therapies) ( <i>please specify</i> )		

73. Some couples break off infertility treatment. Have you broken off infertility treatment?

1. Yes
2. No (*please proceed to question 75*)

74. If you broke off your infertility treatment, what was the reason? *Please answer every question by encircling the number corresponding to your response.*

	Completely agree	Agree	Neither agree nor disagree	Disagree	Completely disagree
I wanted to make a break in the treatment					
My spouse/partner did not want to continue the treatment					
I felt that the treatment was physically too stressful					
I felt that the treatment was emotionally too stressful					

I had already tried all those treatments that I was prepared to use					
I wanted to do something else instead of having a child					
I decided that motherhood was not so important for me					
I decided to adopt a child instead					
Other ( <i>please specify</i> )					

75. Have you been satisfied with the information and counselling you received during infertility investigations and treatment? (*Please answer every question by encircling the number corresponding to your response*)

	Very satisfied	Satisfied	Neither satisfied nor unsatisfied	Unsatisfied	Very unsatisfied
About investigations and treatments					
About the psychological effects of infertility					
About possible medical risks or side effects related to investigations and treatment					

I wish to add:

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76. What do you know to be the cause of your infertility? *You may choose more than one response.*

1. My ovarian tubes are closed
2. I have irregular ovulation, no ovulation
3. The quality of my partner's sperm has dropped
4. No cause was found
5. Other (*please specify*) \_\_\_\_\_

#### CONTRACEPTIVE METHODS

All respondents continue here

If you have had sexual intercourse then please continue from question 77.

If you have never had sexual intercourse, then please proceed to question 88.

77. Which contraceptive method did you use in your first sexual intercourse (you can choose several alternatives)?
1. I did not use a contraceptive
  2. A hormonal contraceptive method (pills, patch, vaginal ring)
  3. A hormonal depo injectable (*Depo-Provera*)
  4. A hormonal intrauterine system (hormonal IUD *Mirena*)
  5. An intrauterine device (copper coil)
  6. Condom
  7. Spermicides (vaginal ovules, creams)
  8. Implants
  9. Sterilisation
  10. Rhythm method (calculating “risky” days)
  11. Withdrawal (the man does not let the sperm into the vagina)
  12. Vaginal douching after intercourse
  13. Emergency contraceptive pills (SOS-pills)
  14. Some other method (*please specify*) \_\_\_\_\_
  15. I don’t remember
78. Which contraceptive method did you use during your last sexual intercourse? (you can choose several answers)
1. I did not use a contraceptive
  2. A hormonal contraceptive method (pills, patch, vaginal ring)
  3. A hormonal depo injectable (*Depo-Provera*)
  4. A hormonal intrauterine system (hormonal IUD *Mirena*)
  5. An intrauterine device (copper coil)
  6. Condom
  7. Spermicides (vaginal ovules, creams)
  8. Implants
  9. Sterilisation
  10. Rhythm method (calculating “risky” days)
  11. Withdrawal (the man does not let the sperm into the vagina)
  12. Vaginal douching after intercourse
  13. Emergency contraceptive pills (SOS-pills)
  14. Some other method (*please specify*) \_\_\_\_\_
  15. I don’t remember
79. If you did not use contraception during your last sexual intercourse, what was the reason? Please choose one main reason. If you did use contraception during your last sexual intercourse, then please proceed to question 80.
1. I wanted to get pregnant
  2. I am/was pregnant
  3. I was breast feeding a less than 6-month-old baby
  4. I was not aware of available contraceptive methods
  5. I was afraid of the side effects of contraceptive methods
  6. My partner didn’t want/didn’t allow me to use contraception
  7. For religious reasons
  8. I am/my partner is infertile
  9. Other reason (*please specify*) \_\_\_\_\_

80. Are you satisfied with your current contraceptive method?
1. Very satisfied
  2. Fairly satisfied
  3. Fairly dissatisfied
  4. Very dissatisfied
  5. I don't use contraception at the moment
81. How often was a condom used when you had sexual intercourse during the last year (12 months)?
1. Every time
  2. Mostly
  3. Rarely
  4. Never
  5. I have not had sexual intercourse during the last year (12 months)
82. Are you, or have you ever been afraid of the side effects/health impacts of a contraceptive method?
1. No
  2. Yes (*please specify what method and what side effects*)
83. Have the costs affected your decisions concerning the use of contraceptive methods during the last year (12 months)?
1. No
  2. Yes, due to the high cost, I do not use the method I would have preferred
  3. Yes, I have not been able to visit the doctor as often as necessary
  4. Other (*please specify*) \_\_\_\_\_
  5. I did not need to use any contraceptive methods during the last year
84. When did you last visit a health care service for contraceptive counselling or prescription?
1. Less than 6 months ago
  2. 6–11 months ago
  3. 1–2 years ago
  4. 3–5 years ago
  5. More than 5 years ago
  6. I haven't visited a health care institution for that purpose
  7. I don't remember
85. Which health care service did you last visit in order to receive contraceptive counselling/prescription?
1. gynaecologist at a women's outpatient clinic
  2. gynaecologist at a private clinic
  3. midwife
  4. family doctor
  5. youth-friendly clinic
  6. elsewhere (*please specify*) \_\_\_\_\_
  7. I haven't visited a health care service for that purpose (*please proceed to question 87*)
86. In retrospect, evaluate how well the following aspects of care were carried out during your last visit for contraception counselling or prescription? *Please answer every question by encircling the appropriate response (choose one from each row)*



	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied
Friendliness					
Competence					
Reliability					
Length of the visit					

87. Have you ever used morning-after pills?

1. No
2. Yes

⇒ All respondents continue here.

88. Where would you prefer to go for contraceptive counselling or prescription?

*Please choose only one answer*

1. A gynaecologist at a women's outpatient clinic
2. A gynaecologist at a private clinic
3. A midwife
4. A family doctor
5. Youth-friendly clinic
6. Elsewhere

#### PLANS FOR HAVING CHILDREN

89. If you became pregnant now, what would be your most probable decision?

1. I would give birth
2. I would have an abortion
3. I don't know
4. I am pregnant at the moment

90. If you think in general terms, not from your personal point of view, then:

1. What is the ideal number of children in a family nowadays? \_\_\_\_\_ child/children
2. What is the ideal age for having a first baby?
  - a) for a woman \_\_\_\_\_ years
  - b) for a man \_\_\_\_\_ years

91. How many children would you yourself like to have? \_\_\_\_\_ child/children

92. Do you have or have you had a child?

1. Yes \_\_\_\_\_ (*please indicate the total number of children*)
2. No

The next question is intended for those who do not have a child of their own. If you do have a child/children of your own then please proceed to question 94.

93. If you do not have a child, then how important are the following reasons for this?

*Please indicate your answer by encircling the appropriate response on every row.*

	Important	Unimportant	I can't say
I haven't met such a partner with whom I could/would have liked to have a child			
We have not succeeded in having a child			

My health problems prevent us having/bringing up a child			
My partner's health problems prevent us having/bringing up a child			
I wish to finish my studies first			
My partner wishes to finish his studies first			
I wish to get stable work first			
My partner wishes to get stable work first			
I want to go on with my career			
I feel that I am not mature enough to take responsibility for a child			
I feel that my partner is not mature enough to take responsibility for a child			
For economic reasons			
I would like to have stable living conditions first			
problems in the relationship with my partner			
Other reason important for you ( <i>please specify</i> )			

94. Do you intend to have (more) children in the future?

1. No (*please proceed to question 96*)
2. I don't know, I'm not sure (*please proceed to question 96*)
3. Yes
4. I am pregnant at the moment, I wish to have another child/children in the future

95. If you wish to have a child/children in the future, then how important are the following reasons for you? *Please indicate your answer by encircling the appropriate response on every row.*

	Important	Unimportant	I can't say
The child/children we have need a brother/sister			
I wish to have a daughter			
I wish to have a son			
I enjoy watching a child's development			
life continues only through children			
my partner wishes to have more children			
I wish to have a child with my current/new partner			
A common child is a sign of mutual love			
I desire a little baby/have "baby fever"			
More children are needed to preserve the Estonian nation			
I do not want to be alone when I am old			

Children are of help doing domestic work			
I wish to take care of a child and love him/her			
I want to have a big family			
I want (once more) to experience a delivery			
I wish to experience motherhood			
A human being has to have as many children as God gives			
A child gives you a goal in life, to live and work			
Children bring variety to one's life			
Having a child entitles you to parental benefit (so-called mother's wage)			
Other reason important for you ( <i>please specify</i> )			

96. If you do not want to have (more) children or are unsure, then how important are the following reasons for you? *Please encircle the number corresponding to your response on every row.* If you wish to have children in the future, then please proceed to question 97.

	Important	Unimportant	I can't say
I already have the number of children I wished for			
I am not married/cohabiting			
There is no suitable father for the child			
My partner does not want (more) children			
My partner does not take part in domestic work and looking after children as much as I would expect			
There are problems in our relationship			
I wish to spend more time with my partner and shared hobbies			
I am not able to have children probably			
If I have a child I cannot continue working/studying (as much as I do now)			
I am afraid that in case of a new child I will lack time and attention for my older child/children			
I am afraid that life would be too hard			
I do not want to be engaged with little children (any more)			
I do not want to be pregnant and/or give birth (any more)			

I think I am too old for having babies			
I want to dedicate myself to other things I am interested in			
I/we do not have enough money to raise (more) children			
Our living conditions are not suitable for a bigger family and we are not able to improve them			
I/my partner do not have stable employment			
The possibilities of help in looking after the child are unstable			
Society does not support families with children enough			
The world is overpopulated			
My health problems prevents me having a child			
My partner's health problems prevents me having a child			
Other reason that is important for you ( <i>please specify</i> )			

97. What effect can possible changes in society/in your private life have on your decision about having children? *Please encircle the number corresponding to your response on every row.*

	Important	Unimportant	I can't say
Improvement/stabilisation of personal economic conditions			
Moving to a larger home			
Sufficient possibilities to be at home with a child/children			
Sufficient opportunities for acceptable babysitting arrangements			
An increase in financial assistance to families with children			
The availability of a good and trustworthy childcare (e.g. near home)			
Women's and men's more equal participation in domestic work			
Certainty that your job will still be there after you have given birth			
Working hours are shorter and more flexible			
Estonia becomes a safer place to live			
Estonia's population decreases to a critical level			

People are more friendly towards children			
Solution of global problems (pollution, nuclear weapons etc)			
I am probably not able to have children			
Other reason important for you ( <i>please specify</i> )			

## HEALTH

98. How tall are you? \_\_\_\_\_ cm
99. How much do you weigh (when not pregnant)? \_\_\_\_\_ kg
100. At what age did you have your first menstruation?
1. \_\_\_\_\_ years
  2. I have not had any menstruations
101. How do you rate your current level of health?
1. Very good
  2. Good
  3. Neither good nor bad
  4. Bad
  5. Very bad
102. To what degree do you agree with the following statement „In general I am satisfied with my life at the moment.“
1. Completely agree
  2. Agree
  3. Neither agree nor disagree
  4. Disagree
  5. Completely disagree
103. Do you have any long-term illness or health problem that limits your everyday activities?
1. Yes (*please specify*) \_\_\_\_\_
  2. No
104. How often have you had a feeling of hoplessness, despondency, depression during the last year (12 months)?
1. Not at all
  2. On several days
  3. On more than half of days
  4. Almost every day/every day
105. Do you take antidepressants at the moment?
1. No
  2. Yes
106. Have you smoked at least one cigarette, e-cigarette, cigar or pipe a day during the last year (12 months)?
1. No
  2. No, but I have smoked before
  3. Yes, I smoke daily
  4. Yes, I smoke occasionally
107. How often have you been drunk from alcohol (sufficiently to loose control of yourself) during the last year (12 months) ?

1. Daily
2. A few times a week
3. Once a week
4. A couple of times a month
5. Once a month
6. Once every two months
7. 3–4 times a year
8. 1–2 times a year or less
9. Never

108. Have you ever used narcotic substances (drugs)?

1. No
2. Yes, once
3. Yes, on some occasions
4. Yes, frequently

109. Have you ever suffered from any of the following illnesses? *Please answer all the questions by encircling the number corresponding to your response.*

	No	Yes	Don't know/have not been tested
genital herpes			
condylomas on genitals			
chlamydiosis			
gonorrhoea			
syphilis			
HIV/AIDS			
trichomoniasis			

The next questions are about emotional, physical and sexual abuse.

110. Have you experienced emotional abuse as a child (less than 18 years old) or as an adult (18 years old or older)? *Please answer every question by encircling the number corresponding to your response.*

	No	Yes, as a child	Yes, as an adult	Yes, as both a child and an adult
Have you experienced anybody systematically and for any longer period trying to repress, degrade or humiliate you?				
Have you experienced anybody systematically and by threat or force trying to limit your contacts with others or totally control what you may and may not do?				
Have you experienced living in fear because somebody systematically and for a longer period has threatened you or has tried to injure you or somebody close to you?				

111. Have you talked to anyone about the emotional abuse?
1. No
  2. Yes (to whom?) \_\_\_\_\_
  3. I have not experienced any emotional abuse
112. Have you experienced any emotional abuse (anything from the list above) during the last year (12 months)?
1. Yes
  2. No (Please proceed to question 114)
113. If you have experienced emotional abuse (anything from the list above) during the past year (12 months), then who was the perpetrator?
1. My present partner, with whom I live (husband/civil partner)
  2. Former partner (husband/civil partner)
  3. Present partner, with whom I do not cohabit (am dating)
  4. Former partner, with whom I have not cohabited (was dating)
  5. Family member or other person close to me (Please specify) \_\_\_\_\_
  6. An acquaintance, colleague, friend
  7. A stranger
114. Have you experienced physical abuse as a child (less than 18 years old) or as an adult (18 years old or older)? *Please answer every question by encircling the number corresponding to your response.*

	No	Yes, as a child	Yes, as an adult	Yes, as both a child and an adult
Have you experienced anybody hitting you, smacking your face or holding you firmly against your will?				
Have you experienced anybody hitting you with his/her fist(s) or with a hard object, kicking you, pushing you violently, giving you a beating, or doing anything similar to you?				
Have you experienced anybody threatening your life by, for instance, trying to strangle you, showing a weapon or knife or by any other similar act?				

115. Have you talked to anyone about the physical abuse?
1. No
  2. Yes (to whom?) \_\_\_\_\_
  3. I have not experienced any physical abuse
116. Have you experienced any physical abuse (anything from the list above) during the last year (12 months)?
1. Yes
  2. No (Please proceed to question 118)
117. If you have experienced physical abuse (anything from the list above) during the past year (12 months), then who was the perpetrator?
1. My present partner, with whom I live (husband/civil partner)
  2. Former partner (husband/civil partner)
  3. Present partner, with whom I do not cohabit (am dating)

4. Former partner, with whom I have not cohabited (was dating)
  5. Family member or other person close to me (Please specify) \_\_\_\_\_
  6. An acquaintance, colleague, friend
  7. A stranger
118. Have you experienced sexual abuse as a child (less than 18 years old) or as an adult (18 years old or older)? *Please answer every question by encircling the number corresponding to your response.*

	No	Yes, as a child	Yes, as an adult	Yes, as both a child and an adult
Has anybody against your will touched parts of your body other than the genitals in a 'sexual way' or forced you to touch other parts of his or her body in a 'sexual way'?				
Have you in any way been sexually humiliated; e.g. by being forced to watch a porno movie or similar against your will, forced to participate in a porno movie or similar, forced to show your body naked or forced to watch when somebody else showed his/her body naked?				
Has anybody against your will touched your genitals, used your body to satisfy him/herself sexually or forced you to touch anybody else's genitals?				
Has anybody against your will put his penis into your vagina, mouth or rectum or tried to put an object or other part of the body into your vagina, mouth or rectum?				

119. Have you talked to anyone about the sexual abuse?
1. No
  2. Yes (to whom?) \_\_\_\_\_
  3. I have not experienced any sexual abuse.
120. Have you experienced any sexual abuse (anything from the list above) during the last year (12 months)?
1. Yes
  2. No (Please proceed to the end of the questionnaire on the next page)
121. If you have experienced sexual abuse (anything from the list above) during the past year (12 months), then who was the perpetrator?
1. My present partner, with whom I live (husband/civil partner)
  2. Former partner (husband/civil partner)
  3. Present partner, with whom I do not cohabit (am dating)
  4. Former partner, with whom I have not cohabited (was dating)
  5. Family member or other person close to me (Please specify)
  6. An acquaintance, colleague, friend
  7. A stranger



We thank you from the heart for finding the time to answer this questionnaire! Your answers will help better understand women's sexual-health related needs and will help improve women's health.

If you wish to add anything then please write it here:

## SUMMARY IN ESTONIAN

### Isikutevaheline vägivald Eestis: levimus, mõju tervisele ja tervisekäitumisele

Ajalooliselt on vägivald mänginud olulist rolli tsivilisatsioonide arengus ning ühiskondlike hierarhiate kujunemises. Tegemist on nähtusega, mis esineb kõigis kultuurides, kuid selle väljendumine sõltub konkreetse kultuuriruumi väärtustest ning erinevatest teguritest, mis mõjutavad ühiskonnas valitsevat stabiilsust ning korda (Renzetti et al., 2010). Keskkel kohal vägivalda teoreetilises käsitluses on võim, kuna vägivald ei teki sotsiaalses vaakumis, vaid on otseselt seotud kehtivate kokkuleppeliste normide ja lubatava käitumisega (Ray, 2011). Ühiskondlikud tõekspidamised võivad soosida vägivaldset käitumist üldiselt või kindlate gruppide vastu suunatuna, viimase üheks väljendunumaiks näiteks on genotsiid (Krug et al., 2002). Vägivald on väga lai termin ning hõlmab muuhulgas sõda, terrorismi ja inimkaubandust. Lisaks sellele, et tegemist on tõsise inimõiguste rikkumisega, on vägivald oluline rahvatervise probleem (Krug et al., 2002; Niemi et al., 2020).

Käesolev uurimistöö keskendub spetsiifilisemalt isikutevahelisele vägivaldale (IV, ingl k. *interpersonal violence*). Maailma Terviseorganisatsiooni definitsiooni järgi on see vägivalda alavorm, mis leiab aset üksikisikute vahel ning seda jaotatakse omakorda pere- ja lähisuhtevägivaldaks ning ühiskondlikuks vägivaldaks (Krug et al., 2002). Käesolevas töös hõlmab IV mõlemat eelmainitud alavormi.

Vägivalda levimust konkreetsetes kultuuriruumis mõjutavad selles kehtivad sotsiaalsed normid. Nende paremaks mõistmiseks kasutatakse sotsiaal-ökoloogilist mudelit, millel on neli kontsentriselt paiknevat ning üksteist vastastikuselt mõjutavat taset: individuaalne, lähisuhted/perekondlik, kogukondlik ja ühiskondlik (Heise, 1998; Krug et al., 2002). Vägivalda kogemise ja toimepanemise riskitegurid võivad olla samad, näiteks tõstab mõlema riski vägivalda kogemine lapsena (Hamby & Grych, 2013). Lisaks võivad paljud neist samaaegselt olla vägivalda kogemise tagajärjeks kui ka selle (taas)kogemise riskiteguriks (Hamby & Grych, 2013; World Health Organization and London School of Hygiene and Tropical Medicine, 2010). Näiteks alkoholi ning narkootikumide tarvitamist on seostatud sooviga leevenda vägivalda kogemise tagajärjel tekkinud vaimse tervise probleeme ning samas muudab nende kasutamine inimese kaitsetumaks uute rünnakute suhtes (Larsen, 2015; Resnick et al., 1997; Wells et al., 2015).

Vägivalda kogemisel on negatiivne mõju inimese füüsilisele, vaimsele ja seksuaaltervisele. Vägivalda tagajärjed tervisele jaotatakse tekkeaja ja kestuse järgi kohesteks ja pikaajalisteks (Garcia-Moreno et al., 2012). Kohesed on näiteks füüsilise vägivalda tagajärjel tekkinud luumurrud, seksuaalvägivalda tõttu soovimatu raseduse teke või seksuaalsel teel leviva infektsiooniga nakatumine (J. Campbell, 2002; Jina & Thomas, 2013; Porter et al., 2019). Vägivalda pikaajalised tagajärjed võivad tekkida või süveneda aastate jooksul ning olla ise-

loomult kroonilised (näiteks erinevad meeleoluhäired, post-traumaatiline stressihäire, kroonilise valu sündroom) ning mõjutada oluliselt inimese elukvaliteeti (J. Campbell, 2002; Coker et al., 2002; Devries et al., 2011). On leitud, et kasvamine probleemses perekeskkonnas ja/või vägivalda kogemine lapsena tõstab oluliselt riski erinevateks kroonilisteks haigusteks ning riskikäitumisteks täiskasvanuna (Felitti et al., 1998). Lisaks on leitud, et erinevatel vägivaldavormidel on negatiivne koosmõju tervisele (Finkelhor et al., 2007a, 2007b). Erinevate vägivaldaliikide kogemist elu jooksul nimetatakse hulgiõhvrüstamiseks (ingl k. *polyvictimization*) (Scott-Storey, 2011).

Kuna vägivald on niivõrd laialt levinud ning eksisteerib kõikides kultuurides, on oht, et seda nähakse kui kurba, kuid vältimatut elu osa. Õnneks on viimase paarikümne aasta jooksul vägivalda käsitlevate teadustööde hulk järjest suurenenud ning märkimisväärselt paranenud arusaam vägivalda olemusest, seda põhjustavatest teguritest ning viisidest, kuidas on võimalik vägivalda ennetada. Kuna kultuurikeskkonnal ja ühiskonna ajaloolisel taustal on vägivalda soodustavate tegurite kujunemisel võtmeroll, siis on väga oluline, et vägivalda käsitlevaid uuringuid viidaks läbi erineva taustaga keskkondades. Vaid sellisel juhul on võimalik läbi viia sekkumis- ja ennetusprogramme, mis arvestavad konkreetse kultuurikeskkonna eripäradega. Võrreldes Põhja-Ameerika ning teiste Euroopa riikidega on postsovetlikes riikides IV käsitlevate uuringute hulk olnud vähene ning seetõttu ka teadmised selles valdkonnas olnud pigem piiratud. Käesoleva uurimistöö eesmärk oli kõrvaldada see lünk uurides IV levikut Eestis elavate meeste ja naiste hulgas. Täiendavalt analüüsiti, millised taustategurid on seotud vägivalda kogemisega täiskasvanuna ja kuidas IV mõjutab üldist füüsilist, vaimset ja seksuaaltervist ning tervisekäitumist.

## **Eesmärgid**

Doktoritöö üldeesmärk oli selgitada välja isikutevahelise vägivalda erinevate vormide ja hulgiõhvrüstamise levimus, riskitegurid ja seosed vastaja enda poolt hinnatud tervisega Eestis elavate meeste ja naiste seas.

Töö alaeesmärgid olid:

1. Uurida naiste hulgas seksuaalvägivalda levimust ning seoseid riskiva tervise- ja seksuaalkäitumisega.
2. Hinnata naiste hulgas vaimse, füüsilise, seksuaalse vägivalda ja hulgiõhvrüstamise levimust ning nende seoseid üldise füüsilise ning vaimse tervise ja seksuaaltervisega.
3. Kirjeldada meeste ja naiste hulgas isikutevahelise vägivalda levimust ja esinemismustreid ning uurida sotsiaal-demograafiliste taustategurite seoseid hulgiõhvrüstamisega täiskasvanuna.

## Andmed ja metoodika

Andmed pärinevad kahest rahvastikupõhisest läbilõikeuuringust “Eesti Naiste Tervis 2014: seksuaal- ja reproduktiivtervis, tervisekäitumine, hoiakud ja tervishoiuteenuste kasutamine” (ESTRE) ja “Eesti meeste hoiakute ja käitumise uuring: tervis, haridus, tööhõive, ränne ja pereloom” (EMU), mis mõlemad viidi läbi 2014. aastal (Lippus et al., 2015; Themis et al., 2015). Küsimustike koostamisel võeti arvesse seda, et tulemused oleks omavahel võrreldavad ning vägivalda levimuse hindamiseks kasutati mõlemas uuringus rahvusvaheliselt tunnustatud ning nii meestel kui ka naisel kasutamiseks valideeritud küsimustikku NorAQ (Swahnberg, 2011; Swahnberg & Wijma, 2003). Nii ESTRE kui ka EMU küsimustikud olid saadaval eesti- ja venekeelsena ning vastata oli võimalik paber- ja elektroonselt. Küsimustiku täitmine oli anonüümne ning vastajatel oli õigus igal hetkel oma osalemisest taganeda. ESTRE puhul saadeti küsimustikud välja 5233 naisele ning lõplikuks vastamismääraks kujunes 47,0%. EMU puhul saadeti kutse uuringus osalemiseks 4800 mehele ning lõplikuks vastamismääraks oli 45,9%.

Andmete töötlemiseks kasutati andmetöötlustarkvara STATA 12.1 (StataCorp, 2012).

## Uurimuse tulemused ja järeldused

1. Seksuaalvägivalda oli elu jooksul kogunud 22,7% naistest. Selle kogemine oli seotud suitsetamise, alkoholi ja narkootikumide tarvitamise, rasestumisvastaste vahendite mittekasutamise, raha või muu majandusliku hüve eest seksuaalvahekorras olemise, samaaegselt mitme seksuaalpartneri omamise ning seksuaalsel teel leviva infektsiooniga nakatumise suurema šansiga.
2. Valdav osa naistest (55,3%) olid elu jooksul kogunud vähemalt ühte vägivaldavormi ning 27,9% hulgihvristamist. Ilmnes et naistel, kes olid kogunud kõiki kolme vägivaldavormi, oli kõrgeim kohandatud šansisuhe tajumaks oma tervist pigem halvana, neil esines enam igapäevaseid tegevusi piiravaid kroonilisi haiguseid, lootusetuse tunnet/masendust/depressiooni, rahulolematust oma eluga, mure oma seksuaalelu pärast ning seksuaalset düsfunktsiooni.
3. Isikutevahelise vägivalda levimus Eestis on kõrge, meestest 66,6% ja naistest 54,2% olid elu jooksul kogunud vähemalt ühte vägivaldavormi. Kõige enam raporteerisid vastajad vägivalda kogemist enne 18. eluaastat. Olulised erinevused ilmnemise meeste ja naiste vägivaldakogemuse muistrites nii lapsena kui ka täiskasvanuna. Mehed olid kõige enam kogunud ainult füüsilist vägivalda. Naiste hulgas oli palju sagedasem nii lapsena kui ka täiskasvanuna erinevate vägivaldavormide kogemine. Kõigi kolme vägivaldavormi levimus lapsepõlves oli naiste seas kolm korda ning täiskasvanuna seitse korda suurem kui meeste hulgas. Oluline on ka välja tuua, et seksuaalvägivalda levimus erines märkimisväärselt sugude lõikes. Elu jooksul oli seksuaalvägivalda kogunud vähem kui iga kahekümnes mees ning ligi veerand naistest. Uuringus ana-

lүүsiti taustatunnuste seoseid vägivalla kogemise riskiga täiskasvanuna. Nii meeste kui ka naiste seas oli lapsepõlves vägivalla kogemine seotud suurema šansiga täiskasvanuna kogeda nii mistahes vägivallavormi kui ka hulgiohvrismist. Samuti oli mõlema soo puhul vanuse tõus seotud vägivalla kogemise suurema tõenäosusega. Viimane oli ka oodatav tulemus, sest kuigi noorem iga on iseenesest riskitegur vägivalla kogemiseks, siis vägivallaga kokkupuutumise võimaluste hulk suureneb ajas. Täiskasvanuna mitme erineva vägivallavormi kogemine oli nii meeste kui ka naiste seas seotud ema madala/teadmata haridustaseme ning vastaja keskmise või halva majandusliku olukorraga. Naiste hulgas oli täiskasvanuna hulgiohvrismise kogemiseks suurem šans lisaks ka neil, kelle emakeel ei olnud eesti keel, kellel oli alg- või keskkharidus, ei olnud abielus ja kellel oli vähemalt üks bioloogiline laps.

Isikutevaheline vägivald on Eestis väga levinud nii meeste kui ka naiste seas. Kõige enam oli vägivalda kogetud lapsena. Oluline on välja tuua, et hoolimata sellest, et nii meeste kui ka naiste seas on isikutevaheline vägivald levinud probleem, siis selle esinemismustrid ja seotud taustategurid on sugude lõikes erinevad. Uuring näitas, et vägivalla kogemine on seotud halvema füüsilise, vaimse ja seksuaaltervisega ning erinevate terviseriskikäitumistega.

## **Praktilised soovitused**

1. Uuringu tulemustest järeldub kuivõrd oluline on vägivalla primaarne preventioon lapsepõlves. Eestis on juba mõned olulised sekkumised vägivalla ennetamiseks sisse viidud, näiteks on inimeseõpetuse ainekava osaks vägivalla käsitlemine ning koolides ja lasteaedades toimuvad kiusamisvastased programmid. Nende muudatuste täit tulemust näeb alles aastate või lausa aastakümnete pärast ning seetõttu on väga oluline nende püsiv jätkumine. Kuna valdav enamus laste vastu suunatud vägivallast leiab aset kodus ning vägivallatsejaks on lapsele tuttav inimene, siis on oluline pöörata tähelepanu sellele, et kõrge riskiga perekonnad leitaks õigeaegselt üles ning probleemide ilmnemisel sekkutaks viivitusteta ning tõhusalt. Näiteks on leitud, et positiivsed vanemlusprogrammid aitavad vägivalda ennetada.
2. Vägivalla kogemise mustrid ning riskitegurid erinesid sugude lõikes. Selle teadvustamine aitab välja töötada tõenduspõhiseid vägivalla ennetus- ning sekkumismeetmeid. Juba varajases east tuleb soodustada soolist võrdõiguslikkust ning vähendada kahjulike soostereotüüpide teket.
3. Uuringu tulemused näitasid seost vägivalla kogemise ja riskiva tervisekäitumise ning negatiivsete tervisetulemite vahel. Kuna tervishoiutöötajad mängivad olulist rolli vägivalla sekundaarses preventioonis, siis on selle info teadvustamine nende hulgas ääretult oluline. Üheks oluliseks viisiks tagamaks, et kõigil tulevastel tervishoiutöötajatel oleks esmased teadmised vägivallaga seotud teemade käsitlemisest, on nende teemade integreerimine kohustusliku õppeprogrammi hulka. Võimalike seoste teadmine aitab vägivalda ära

tunda ning pakkuda parimat võimalikku abi. Vägivallaohvrite abistamine ilma negatiivsete hoiakute ning eelarvamusedeta on väga oluline, et ennetada või vähendada negatiivsete tervisemõjude teket. Tervishoiutöötajaid peab toetama hästi organiseeritud tervishoiusüsteem, et tagada teenuse osutamiseks piisav aeg, sobiv keskkond ja tõhusad süsteemid inimese suunamiseks edasistele teenustele. Eestis loodi 2016. aastal seksuaalvägivalla kriisiabikeskused ning käesolev uuring rõhutab kui oluline on taoliste teenuste kättesaadavus ning püsiv rahastatus.

4. Vägivalla kogemine võib olla seotud väga erinevate probleemide tekkimisega ning see, millist abi keegi vajab, võib samuti olla väga erinev. Seetõttu on vajalik abi ning teenuste pakkumisel lähtuda konkreetsest inimestest ning selleks on vajalik erinevate spetsialistide (meedikud, sotsiaaltöötajad, politsei jt) koostöö. Teadmised tervise ja tervisekäitumisega seotud probleemidest vägivalla ohvritel aitavad kõigil jõuda vajadusepõhise abini, vältida taasohvristamist ja vägivalla jätkumist.

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## CURRICULUM VITAE

Name: Hedda Lippus-Metsaots  
Date of birth: September 2, 1987  
Citizenship: Estonian  
Address: L. Puusepa 8, 50406, Tartu  
E-mail: hedda.lippus@gmail.com

### Education

2019–... University of Tartu, Institute of Clinical Medicine, residency in psychiatry  
2017–2018 Emory University, Rollins School of Public Health, Department on Behavioral Sciences and Health Education, Fulbright scholar  
2014–2021 University of Tartu, Institute of Clinical Medicine, PhD studies  
2013–2014 University of Tartu, Institute of Clinical Medicine, residency in obstetrics and gynaecology  
2007–2013 University of Tartu, Faculty of Medicine, Medical Doctor degree  
1995–2006 Tallinn French School

### Professional employment

2018–2021 Emory University, Hubert Department of Global Health, adjunct assistant professor  
2016–... Sexual Health Clinic, physician  
2015–2016 Tartu Sexual Health Clinic, physician  
2014–2015 University of Tartu, Institute of Clinical Medicine, Women's Clinic, specialist

### Scientific work and professional organizations

Research fields: interpersonal violence, violence against women  
Membership: Estonian Psychiatric Association  
Estonian Sexual Health Association

### Publications related to the thesis:

1. Lippus H, Laanpere M, Part K, Ringmets, I, Karro H. What do we know about the impact of sexual violence on health and health behaviour of women in Estonia? *BMC Public Health*. 2020;20:1–8.
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## ELULOOKIRJELDUS

Nimi: Hedda Lippus-Metsaots  
Sünniaeg: 2. september 1987  
Kodakondsus: Eesti  
Aadress: L. Puusepa 8, 50406, Tartu  
E-post: hedda.lippus@gmail.com

### Haridus

2019–... Tartu Ülikool, Kliinilise meditsiini instituut, Psühhiaatrikliinik, psühhiaatria residentuur  
2017–2018 Emory Ülikool, Rollins School of Public Health, Fulbrighti stipendiaat  
2014–2021 Tartu Ülikool, Meditsiiniteaduste valdkond, doktoriõpe  
2013–2014 Tartu Ülikool, Kliinilise meditsiini instituut, Naistekliinik, sünnitusabi ja günekoloogia residentuur  
2007–2013 Tartu Ülikool, Kliinilise meditsiini instituut, arstiteaduse bakalaureuse- ja magistriõppe integreeritud õpe  
1995–2006 Tallinna Prantsuse Lütseum

### Töökogemus

2018–2021 Emory Ülikool, Hubert Department of Global Health, teadustöötaja  
2016–... Seksuaaltervise Kliinik, arst-noortenõustaja  
2015–2016 Tartu Seksuaaltervise Kliinik, arst-noortenõustaja  
2014–2015 Tartu Ülikool, kliinilise meditsiini insituut, naistekliinik, spetsialist

### Teadustöö ja kuulumine erialaorganisatsioonidesse

Uurimisvaldkond: isikutevaheline vägivald, naistevastane vägivald  
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Eesti Seksuaaltervise Liit

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