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Exposed to Violence

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Abstract

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Violence against women is a crime against human rights and a major global public health issue affecting the lives of millions of girls and women worldwide. Exposure to violence poses a threat to health, both in the short and the long term. To minimize the devastating consequences of violence it is central to identify girls and women who have been exposed and to find possible risk factors that may serve as targets for prevention efforts.

The main aims of this thesis were to study the prevalence of sexual, physical and psychological violence among women in Sweden and to explore possible associations to violence and polyvictimization during childhood as well as sociodemographic factors.

In a family planning unit, 1226 women seeking either termination of pregnancy or contraceptive counseling were recruited to answer questions about different types of violence. Of the women seeking termination of pregnancy, 29% reported experiences of intimate partner violence, compared to 22% of women seeking contraceptive counseling. Of all the women attending a family planning unit, 27% reported lifetime experiences of sexual violence.

A survey containing questions about lifetime experiences of sexual, physical and/or psychological violence was sent to a national sample of 10 000 women and 10 000 men. Lifetime experiences of at least one type of severe violence were reported by over 50% of both women and men. Sexual violence was more than three times more common among women compared to men.

Rape/attempted rape in adulthood was more common among women who were single, had college-level education and those who had been unemployed or had received social welfare payments.

Exposure to sexual, physical and psychological violence in childhood was highly associated with rape/attempted rape in adulthood among the women respondents.

Conclusion: Lifetime experiences of violence are common among women in Sweden. Multiple exposure to violence during childhood is the most potent risk factor for exposure to sexual violence in adulthood. The findings underscore the importance of detecting individuals who have been exposed in order to offer help, and may contribute to the development of effective prevention programs, especially among children and adolescents.

Keywords: Sexual violence, physical violence, psychological violence, intimate partner violence, childhood violence, polyvictimization

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To my mother

List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

I Öberg, M., Stenson, K., Skalkidou, A., Heimer, G. (2014) Prevalence of intimate partner violence among women seeking termination of pregnancy compared to women seeking contraceptive counseling. *Acta Obstetricia et Gynecologica Scandinavica*, 93(1):45–51

II Öberg, M., Skalkidou, A., Heimer, G. (2019) Experiences of sexual violence among women seeking services at a family planning unit in Sweden. *Upsala Journal of Medical Sciences*, 124(2):135-139

III Öberg, M., Heimer, G., Lucas, S. (2020) Lifetime experiences of violence against women and men in Sweden. *Scandinavian Journal of Public Health,* https://doi-org.ezproxy.its.uu.se/10.1177/1403494820945072

IV Öberg, M., Skalkidou, A., Heimer, G., Lucas, S. (2020) Sexual violence against women in Sweden: Associations with combined childhood violence and sociodemographic factors. *Scandinavian Journal of Public Health,* https://doi-org.ezproxy.its.uu.se/10.1177/1403494820939015

Contents

List of abbreviations

AAS	Abuse Assessment Screen
FRA	European Union Agency for Fundamental Rights
IPV	Intimate partner violence
LISA	Longitudinal Integration Database for Health Insurance and Labour Marketing Studies
TOP	Termination of pregnancy
NCK	The National Centre for Knowledge on Men's Violence Against Women
NorAQ	Norvold Abuse Questionnaire
RTB	Swedish Total Population Register
SCB	Statistics Sweden
SES	Socioeconomic status
UN	United Nations
WHO	World Health Organization

Preface

Human rights have always been a topic of discussion in my family. Growing up in a country ruled by military dictatorship, with parents imprisoned for political reasons during most of my childhood taught me early the importance of democracy and that the right of every child, woman and man to live a safe life of their own choices needs to be something we all have to strive for.

As an adult and obstetrician-gynaecologist I realized that, although I now live in a country ruled by democracy, people still are affected by restricted human rights caused by different forms of violence, and that children and women often suffer the most.

I don't think I would have had the courage to, as my mother did, fight against an oppressive government and risk my freedom and my life. I felt therefore privileged when I got the opportunity to conduct research on the topic of violence against women for the possibility to, in a less risky way, perhaps contribute to raising awareness that a substantial number of women and children live every day with experiences that are not worthy of a democracy, and that we must do everything in our power to gather knowledge on how to end the violence.

Uppsala July 2020,

Mariella Öberg

Introduction

Violence against women

Today violence against women is a prioritized topic that has been raised by societies and governments around the world. Efforts have been undertaken to eliminate violence, including strengthening national laws, policies and strategies, as well as education of professionals. A number of historical developments underline the growing attention to the international and national agendas:

Global actions

1993 - the United Nations (UN) General Assembly adopted the Declaration of Elimination of Violence against Women.[1] The declaration provided a definition of violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life". It also provided an explanation that violence against women is a manifestation of historically unequal power relations between women and men, and a framework for national and international action against violence. Some of those actions included the prevention, investigation and punishment of violence against women, changes in judicial legislation to protect women, and to provision of specialized assistance, for example, rehabilitation, treatment, counseling and health and social services for subjected women.

1995 - the Platform for Action was accepted by 183 nations at the Fourth World Conference in Beijing.[2] The Platform for Action enhanced the Declaration and identified violence against women as one of twelve critical areas of concern that required urgent action to achieve the goals of equality, development and peace. Those actions called for governments to take integrated measures to prevent and eliminate violence against women.

2010 - the UN Women, UN:s Entity for Gender Equality and the Empowerment of Women, was established.[3]

The European Union acts to combat all forms of domestic violence according to the Treaty of the functioning of the European Union, and it is specified that all member states should take necessary measures to punish acts of vio-

lence and to protect the victims.[4] Although violence against women is primarily a matter for the individual member state, the European Union has raised the issue on violence against women in various policy documents and instruments, with the starting point that violence against women is an issue of human rights and freedom.

2011 - the "Council of Europe Convention on preventing and combating violence against women", also known as the "Istanbul Convention" was established. The Istanbul Convention is a set of legally binding guidelines that focuses on prevention of violence against women, protection of women subjected to violence and prosecution of perpetrators. The treaty was ratified by 34 countries and signed by the European Union.[5]

2015 - the UN launched "The 2030 Agenda for Sustainable Development". The 2030 Agenda contains 17 goals including goal 5.2, to eliminate all forms of violence against girls and women, and goal 16.2, to eliminate all forms of violence against children. The 2030 Agenda was adopted by 193 member countries.[6]

Swedish actions

1993 - as an answer to the UN, the Swedish government appointed an official commission with the mission to investigate circumstances of violence against women and to propose interventions against such violence. The commission focused on women's experiences of violence and pointed out the lack of knowledge on violence in Swedish society.[7] Several law amendments and new laws were introduced. The health-care system was recognized as a major actor in identifying women subjected to violence.

1994 - on proposal from the commission, the Swedish government established the National Centre for Knowledge on Men's Violence Against Women in Uppsala. The main tasks in the governments instructions to the center were to undertake medical examination and to provide treatment and support to women subjected to violence, to provide information and education to health-care services and the general public, and to initiate research within the medical services and on an interdisciplinary basis.[8]

1998 - the Swedish government presented a Bill for Action Against Violence Against women where state bodies such as the National Board of Health and Welfare, The National Police Board and Prosecutor General, were instructed to increase their efforts to prevent violence against women and cooperation between public authorities was emphasized.[9]

2007 - the government launched the Action Plan for Combating Men's Violence against Women, Violence and Oppression in the Name of Honour and Violence in Same-Sex Relationships.[10] The Action Plan covered six areas for measures and specific activities including increased protection and support to survivors of violence and greater emphasis on preventive work.

2018 - the government adopted the Swedish action plan for the 2030 Agenda. The action plan contains national strategies to prevent and combat men's violence against women including violence in the name of honour, prostitution and trafficking. The topic of men's violence against women was made mandatory in several University education programs.[11]

2019 - the Council of Europe's Group of Experts on Action against Violence against Women and Domestic Violence (GREVIO), published an evaluation report on Sweden's work with the implementation of the Istanbul Convention. In the report Sweden was credited for amendments to the Criminal code leading to criminalization of non-consensual sexual acts, for having a helpline available 24/7 for women subjected to violence, their relatives and health-care workers, Sweden's National Women's helpline, and for having an evidence-based approach to issues regarding violence against women.[12]

Prevalence of violence

According to the World Health Organization (WHO), 35% of women worldwide have lifetime experiences of either physical and/or sexual partner violence or non-partner sexual violence after the age of 15 years. Furthermore, 30% of women worldwide who have been in a relationship have experienced physical/and or sexual violence from an intimate partner and 38% of murders of women are committed by an intimate partner.[13] A survey by the European Union Agency for Fundamental Rights (FRA) among 42 000 women from 28 member states showed that 33% of the participants had lifetime experiences of physical and/or psychological violence from a partner or former partner, or non-partner sexual violence after the age of 15 years. The average proportion of women with experiences of physical and/or sexual violence in a relationship in the European Union countries was 20%.[14]

In a national prevalence study in Sweden including 10 000 women and 10 000 men, 46% of the female participants reported lifetime experiences of physical, psychological and/or sexual violence.[15] A Swedish study among youth showed that for girls, the lifetime prevalence of physical violence and psychological violence was 43% and 66% respectively. Sexual violence was experienced by 32% of participating girls.[16] The National Council for Crime Prevention conducts the annual Swedish Crime Survey, which measures exposure to different types of crimes. In 2018, 9.9% of women reported experiences of sexual offences during that year. According to criminal statistics, 23 200 sexual offences were reported to the police in Sweden in 2019, of which 8 820 were classified as rape.[17]

In the fall of 2017, the #Metoo-movement rapidly spread worldwide. Hundreds of thousands of women, non-binary and transgender persons got together and on a structural basis told about experiences of sexual harassment and sexual violence. The stories from the movement revealed that there is still much to do to prevent violence both in the workplace and in other parts of

society. The degree of disclosure the movement provided also suggested that social media can represent a new venue for survivors to talk about experiences of sexual violence.[18]

These numbers indicate that all the efforts undertaken by governments are steps along the way, but are far from being sufficient, and that more actions are needed to achieve the 2030 Agenda's goal to eliminate violence against girls and women.

Definition and theoretical framework

During the past decades, extensive research on violence has been conducted. Due to the multifaceted nature of violence, it is often difficult to compare results, and prevalence rates can vary between countries, as well as in different studies performed in the same country.[19] Some of those differences can be explained by genuine differences between study sites, but they may also be related to the methodological choices made by researchers. Studies across different academic disciplines often apply different definitions of violence, different grading scales (e.g. mild, moderate, severe) and varied methods for measurement. The number and types of questions differ across studies as well as the timeframe for exposure, which can be short term (e.g. experiences of violence during the past year) or long term (e.g. lifetime experiences of violence) or related to a specific period in life (e.g. childhood, youth, adulthood). In addition to self-reported data from surveys or interviews from the general population or specific subgroups, data can be drawn from law-enforcement or health care data. [20]

To conceptualize (i.e. define) and operationalize (i.e. describe how instruments are used to measure) violence is therefore of importance in each research context where it is studied.[21]

Definition

The WHO defines violence as: "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". [22]

According to the WHO's typology, violence can be categorized as self-inflicted (suicidal behavior/self-abuse), interpersonal (family/partner, i.e. child, partner, elder and community, or acquaintance/stranger) and collective violence (social, political or economic violence on a multiple scale). The nature of violence can be physical, sexual, psychological or neglect. This thesis focuses on physical, sexual and psychological interpersonal violence.

As mentioned above, definitions of violence can differ between studies. Since we focus on participants experiences of violence in this thesis, we have

chosen to use the terms "psychological" and "emotional" violence synonymously as well as the terms "violence", "abuse" and "victimization", which we also use synonymously.

Intimate partner violence

Intimate partner violence (IPV) is the term used to describe violence against a person in a relationship. The violence can be physical (e.g. hitting, kicking, slapping), sexual (e.g. forced intercourse and other forms of sexual coercion), and/or psychological (e.g. constant humiliation, controlling behavior) and is perpetrated by a partner or former partner. Sometimes IPV is referred to as domestic violence, which is a broader term that can include violence by a family member against children or elders in the same household.[22]

Sexual violence

Sexual violence is defined as "any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work". Besides being part of the violence that can occur in a relationship, sexual violence may also be perpetrated by non-partners (e.g. stranger, acquaintance, friend, family member, colleague, military, etc.).[22] In this thesis we have chosen to use "sexual violence", "sexual abuse" and "sexual victimization" synonymously.

Childhood violence

Childhood violence constitutes of all forms of physical, psychological or sexual violence against children and youth under 18 years of age. The term includes neglect as a form of violence.[22]

Polyvictimization and revictimization

Polyvictimization, cumulative violence, co-occurrence of violence, multiple adversities and other similar terms have been used to describe how violence of one type often occurs in combination with other types of violence or adversities in childhood. Besides employing diverse terminology, researchers also tend to use different cutoff points to define polyvictimization. It is well known that polyvictimization can affect health throughout life in a negative way more profoundly than single types of abuse, but there is no straightforward dose-response relationship between violence exposure and health outcomes. In addition, the patterns surrounding polyvictimization are not yet fully understood.[23-25]

Survivors of childhood abuse are at risk of future revictimization and studies have shown this risk is higher for individuals exposed to multiple types of violence in childhood.[26-28]

The ecological model

The ecological model applied by the WHO is a theoretical framework to help understand the complex nature of violence. The ecological model considers violence as the product of multiple levels of behavioral influence on an individual, relationship, community and society level and points out the risk factors that increase the likelihood of becoming a victim or a perpetrator of violence. In this thesis the ecological model is used as the analytical framework.[22]

Risk factors for violence victimization or perpetration

Risk factors on the individual level include personal and biological causes such as young age, low educational level, substance abuse, or experiences of childhood violence. The relationship level refers to the person's closest social circle; intimate partner, family and peers. Risk factors associated with victimization or perpetration of violence against women at this level can be unequal power in intimate relationships, attitudes and norms accepting violence or economic stress. The community level comprises contexts where social relationships take place such as schools, workplaces and neighborhoods. Weak community sanctions against violence and poverty are considered factors on the community level that can increase the risk of violence victimization or perpetration. The societal level refers to the larger factors in society where traditional gender norms and social norms can be supportive of violence.[29]

Violence and health impact

Intimate partner violence and/or non-partner sexual violence can have a lifelong negative impact on the physical and mental health of exposed girls and women.[30-32] The health consequences can be short- and/or long-term and include a variety of symptoms including gynecological trauma, unintended pregnancy, sexually transmitted infections, sexual dysfunction, and chronic pelvic pain.[33-36] One major consequence of intimate partner violence is the negative influence it might have on women's reproductive health. It can underlie the woman's lack of fertility control and lead to unintended pregnancy or abortion.[37-38] Studies have shown a high prevalence of intimate partner violence among women seeking termination of pregnancy, making this an especially interesting group of women to target in identification efforts. [39-44] Violence also has a major impact on mental health, with women reporting depression, posttraumatic stress disorder, sleeping disorders and suicidal behavior.[45-46]

The role of health-care providers

Due to the multiple of acute symptoms or long-term effects related to violence, survivors will at some point seek medical help. The health-care system is therefore a significant setting for identifying exposed women and health-care

providers should ask questions about exposure to violence as part of the medical history. This is important in order not only to improve the health of the women exposed, research has also shown that children witnessing IPV in the household are at increased risk of being abused. Questions about violence should be asked in privacy and by trained health-care providers, with knowledge of the consequences of violence and of existing services that may offer support to survivors.[47-48]

Prevention of violence

The ultimate approach to end violence against girls and women is primary prevention, i.e. to stop violence before it happens. Secondary prevention comprises of the immediate responses to violence, such as medical examinations, and tertiary prevention covers the treatments given to decrease the long-term effects of violence.[22] Research on primary prevention is still at an early stage. Studies that have been performed show that high-income countries center on response intervention rather than prevention primarily regarding intimate partner violence, and little evidence exists for prevention of other types of violence.[49] In a recently launched campaign called "RESPECT women. Preventing violence against women", the WHO displays seven evidence-based strategies for global policymakers to implement to prevent violence. Those strategies include improving skills in interpersonal communication, economic and social empowerment of women, to provide police, legal, health-care and social services to survivors, to reduce poverty, to provide safer environments in schools, public spaces or work, to prevent childhood violence, and to transform attitudes, beliefs and norms that justify violence against women.[50]

Aims

The main aims of this thesis were to study the prevalence of sexual, physical and psychological violence among women in Sweden and to explore possible associations to violence and polyvictimization during childhood as well as sociodemographic factors.

The aims of the separate studies were:

I To assess the prevalence of intimate partner violence among women seeking termination of pregnancy (TOP) and compare it with the prevalence of intimate partner violence among women seeking contraceptive counseling at the same unit. The secondary aim of the study was to compare all women who had ever undergone TOP with those who never had TOP regarding experiences of intimate partner violence. Thirdly, we wanted to examine if women with repeated TOP were more exposed to intimate partner violence.

II To assess the prevalence and correlates of sexual violence among women seeking care at a family planning unit and to examine associations between sexual violence and other types of violence.

III To investigate the prevalence of lifetime experiences of sexual, physical and psychological violence among a representative sample of women and men in Sweden and to analyze if there were gender differences regarding both the types of violence the participants were exposed to and by whom it was perpetrated.

IV To investigate the prevalence of violence in childhood and sexual violence in adulthood and how exposure to sexual, physical, and psychological violence during childhood, separately or in combination, as well as sociodemographic factors associate with the risk of experiencing sexual violence after the age of 18 in a population-based sample of women in Sweden. The differential impact of these three types of violence in childhood and later sexual victimization was in focus.

Materials and Methods

Table 1. Overview of the studies

Study	Design	Subjects	Exposure	Outcome
I	Cross-sectional study*	635 women seeking termination of pregnancy and 591 women seeking contraceptive counseling age 15-55 years.	Termination of pregnancy vs. contraceptive counseling.	Experiences of intimate partner violence.
II	Cross-sectional study*	1226 women seeking services at a family planning unit	Different risk factors.	Experiences of sexual violence.
III	Population-based, cross-sectional study**	5681 women and 4656 men age 18-74 years.	Violence exposure.	Lifetime experiences of sexual, physical and psychological violence.
IV	Population-based, cross-sectional study**	5681 women age 18-74 years.	Experiences of different types of childhood violence.	Experiences of sexual violence in adulthood.

*Study I and II are derived from the same cross-sectional study population
** Study III and IV are derived from the same cross-sectional study population

Study populations and designs

Studies I and II

The studies were carried out at the family planning unit in Uppsala's University hospital during October 2005 to October 2006, with a 3-month break during the summer. The facility handles both women seeking termination of pregnancy and women in need of contraceptive counseling. All women wanting to terminate a pregnancy need to visit a family planning unit. Women who want contraceptive counseling can visit the family planning unit or consult a midwife in any of various health care centers in the city. For women under 20 years of age, contraceptive counseling is also given at special youth health and student health centers. Those eligible to participate were women who were at

least 15 years of age and spoke Swedish. Women seeking abortion were expected to be younger than women seeking contraceptive counseling. For this reason, chance selection was used but analyses were subsequently adjusted for age, education and occupation. During the study period, about 15 women consulted a doctor for termination of pregnancy every week. About 15 and sometimes has many as 30 women consulted a midwife for contraceptive counseling every day. Women who were at least 15 years of age and spoke Swedish and who consulted one of the midwifes were selected each day to be included. A formal randomization program was not used, but every morning during the study period the registration clerk/secretary put the envelopes containing questionnaires in the consultation list of one of the midwives, who was chosen by chance. Consecutive recruitment of women, chosen also by chance every day from these consultation lists, was performed in order to obtain an equal number of participants in the TOP-group and the group seeking contraceptive counseling.

Upon registration, the women were provided with an envelope containing a cover letter with information about the study and a self-administered questionnaire. The women were assured confidentiality and gave their consent to participate by answering the questionnaire and allowing specially trained staff to interview them. Participants could choose to answer the questionnaire before or after the interview depending on the waiting time for consultation. They were instructed to put the questionnaire in a locked box regardless of whether they completed it or not. The interview took place in the absence of the women's partners and the participants were offered counseling if needed, in accordance with current clinical practice.

A total of 1517 questionnaires were distributed, 759 to women seeking termination of pregnancy and 758 to women seeking contraceptive counseling. Reasons for non-participation included that women declined to participate, they did not understand the questions, was accompanied by a partner or other relative or due to lack of time.

Studies III and IV

The studies were part of a research project developed at The National Center for Knowledge on Men's Violence Against Women (NCK) at Uppsala University, Sweden.[15] The survey was carried out during the spring of 2012. Statistic Sweden (SCB) created a random sample of 10 000 women and 10 000 men aged 18-74 years from the Swedish Total Population Register (RTB) and performed the data collection. An introduction letter was sent to all identified individuals with information about the study and its focus, that the persons could choose not to participate by contacting the research group and that they otherwise would be contacted again within a week. The next letter provided

instructions about how to complete the survey online, and paper questionnaires were sent to those who did not respond to the web-based survey. Four reminders were sent.

The overall non-response rate was disproportionately high for individuals who were young, born outside the Nordic countries or had a low level of education. An analysis of non-responders was performed as previously described by Särndal et al, resulting in a multi-factorial weighting algorithm including sociodemographic factors and welfare-based variables.[51]

Outcomes

Studies I and II

A modified, translated version of the Abuse Assessment Screen (AAS), a validated tool for detection of intimate partner violence, was used for the interviews (Table 2).[52] The self-administered questionnaire consisted of a shortened version of the Norvold Abuse Questionnaire (NorAQ), a tool validated in a Swedish population including questions about psychological (the questionnaire uses the synonym emotional), physical and sexual violence (Table 2).[53-54] We used two different tools in order to increase the probability that the participants would be able to disclose experiences of intimate partner violence. A number of background questions were also included, for example, age, educational level and occupation. Two questions were included only for the women seeking termination of pregnancy; "Has anybody pressured you or forced you to make your decision to get an abortion?" and "Has fear of future violence affected you in your decision to get an abortion?". In addition, we sought to study how the participants preferred to be asked about exposure to violence; through an interview or a self-administered questionnaire.

Data analyzed in the studies came from the questionnaire answers and the interviews. No additional information was collected from the women's medical records.

Table 2. Questions about different types of psychological, physical and sexual violence

Abuse Assessment Screen	
	Have you been physically or psychologically abused before 18 years of age?[1]
	Have you ever been physically or psychologically abused by a partner?
	Have you been kicked, slapped or in other ways experienced any form of physical violence during the past year?[1]
	Have you ever experienced sexual acts against your will?[1, 2]
NorVold Abuse Questionnaire	
Psychological violence	
Mild	Have you experienced anybody systematically and for a long period trying to repress, degrade or humiliate you?[1, 3]
Moderate	Have you experienced anybody systematically and by threat or force trying to restrict your contacts with others or totally control what you may and may not do?[1, 3]
Severe	Have you experienced living in fear because somebody systematically and for a long period has threatened you or somebody close to you?[1, 3]
Physical violence[4]	
Mild	Have you experienced anybody hitting you, smacking your face, or holding you firmly against your will? [1, 3]
Moderate	Have you experienced anybody hitting you with his/her fist(s) or with a hard object, kicking you, pushing you violently, given you a beating, thrashing you, or doing anything similar to you? [1, 3]
Severe	Have you experienced anybody threatening your life, for instance, trying to strangle you, showing a weapon or knife, or by any other similar act?[1, 3]
Sexual violence[4]	
Mild, no genital contact	Has anybody against your will touched parts of your body other than genitals in a sexual way or forced you to touch other parts of his or her body in a sexual way?[1, 3]
Mild, emotional or sexual humiliation	Have you in any other way been sexually humiliated; e.g. by being forced to watch a porno movie or similar against your will, forced to show your body naked, or forced to watch when somebody else showed his/her body naked?[1, 3]
Moderate, genital contact	Has anybody against your will touched your genitals, used your body to satisfy him/herself, or forced you to touch anybody else's genitals?[1, 3]
Severe, penetration	Has anybody against your will put or tried to put his penis into your vagina, mouth, or rectum; put or tried to put an object or other parts of the body into your vagina, mouth, or rectum?[1, 3]

1. If yes, they could state if the perpetrator was a sibling, a peer < 18 years of age, parent or other adult relative, partner, former partner, other acquaintance or unknown.
2. If yes, they could state if it happened before or after they were 18 years of age.
3. If yes, the participants could state if it happened during childhood when they were under 18 years of age, during adulthood when they were 18 years of age or more, or if it happened both during childhood and adulthood.
4. If yes to any type of physical or sexual violence, mild to severe, the participants could state if the violence had happened during the past year.

Study I

To assess the outcome of this study, experiences of intimate partner violence among women seeking TOP, the following variables were measured (questions are displayed in Table 2):

Intimate partner violence: Women answering "yes" to any of the questions regarding experiences of violence, during the interviews or in the survey, and

who reported a present or former partner as perpetrator, were categorized as abused by an intimate partner. Comparisons were made between women seeking TOP and those seeking contraceptive counseling regarding experiences of psychological, physical and sexual violence by a present or former partner.

Intimate partner violence and history of TOP: Participants having TOP previously, regardless of whether they came for TOP or contraceptive counseling during the study period, were compared to those women who never have had TOP regarding experiences of intimate partner violence.

Intimate partner violence and repeated TOP: Women who had had two or more TOPs previously, which were classified as repeated TOP, were compared with those who had had one TOP previously regarding experiences of intimate partner violence.

Study II

To assess the outcome of this study, prevalence of sexual violence among women seeking family planning services, the following variables were collected (questions are displayed in Table 2):

Sexual violence: Women answering "yes" to any of the questions regarding experiences of any type of sexual violence in the questionnaire were categorized as women exposed to sexual violence.

Intimate partner violence: To measure the association between sexual violence and other types of violence experiences, women who answered "yes" to any questions about psychological or physical violence and stated a partner or former partner as perpetrator were categorized as women with experiences of intimate partner violence.

Non-partner sexual violence: Women who answered "yes" to any of the questions regarding sexual violence and stated that the perpetrator was other than partner or former partner were categorized as women with experience of non-partner sexual violence.

Studies III and IV

A questionnaire was designed based on the Adverse Childhood Experiences Study and a previous national prevalence study in Sweden, as no existing survey instrument included all the areas we wished to examine.[55-56] Face validity of the questionnaire and all questions included was evaluated at Statistics Sweden (SCB) with the use of expert review as well as cognitive interviews with persons with and without a history of violence exposure. Minor adjustments were then made in the wording of some questions regarding violence exposure. Before the questionnaire was finalized, a pilot survey was sent to 2000 individuals to test the length of the questionnaire as well as the possible effects that collecting register data might have on the response rate. Four groups of 500 randomly selected individuals were created, such that two

groups received a short version of the questionnaire with half as many questions and two groups received the full version. One group for each questionnaire version was informed that register data would be collected while no such data were collected for the other groups. No significant differences were seen between the groups with regard to response rate. The final instrument consisted of 97 questions in the Swedish language.

Sexual, physical and psychological violence of varying severity were inquired about separately for exposures at ages 0-14, 15-17 and after turning 18. The age of 15 was chosen as a breaking point due to the penal code definition of statutory rape in Sweden, which is sexual contact with a person under the age of 15. For exposure before the age of 18, identical but separate sections addressed violence perpetrated by adults as opposed to peers for each type of violence (Table 3). Other question sections included present health related behaviors as well as current physical and mental health.

Data regarding the respondents' information on social welfare payments and unemployment at any time during the period 2005-2010 were gathered from the Longitudinal Integration Database for Health Insurance and Labour Market Studies (LISA). The database gives a basis for statistics and research about the entire population in Sweden regarding sociodemographic background factors, employment, income, pension and sick leave. Data from the respondents were merged with the LISA data by SCB and the resulting database was anonymized before delivery to the research group.

Table 3. Questions about different types of sexual, psychological and physical violence in childhood and adulthood included in the survey instrument

Violence before 18 years of age	**Type of violence**
Question 1-4: Did it ever happen to you before you were 15 years old/when you were between 15-17 years old that an adult/someone of the same age did the following to you?[1, 2]	<u>Sexual violence:</u> a) Forced you to pose naked[3] b) Caressed you in a sexual way[3] c) Made you touch him/her in a sexual way[3] d) Tried to have intercourse with you (oral, vaginal, anal) but did not complete the act[3] e) Had intercourse with you (oral, vaginal, anal) [3]
Question 5-8: About how often before you were 15 years old/when you were between 15/17 years old did it happen that an adult/ someone of the same age did any of the following to you?[1]	<u>Psychological violence:</u> a) Violated or oppressed you verbally (for example degraded, insulted or humiliated you)[3] b) Threatened to give you a beating[3] <u>Physical violence:</u> c) Hit you with their open palm, pulled your hair, pushed or shook you in a way that was painful d) Hit you with their fist or a hard object, kicked you, took you in a chokehold, etc.[3] e) Caused you harm using a knife or firearm[3] f) Subjected you to another kind of physical violence[3]

Violence after 18 years of age	
Question 9: Has it ever happened, after you turned 18, that a person has done any of the following to you?	Sexual violence: a) Forced you to have sexual intercourse (oral, vaginal, anal) or another similar sexual act (such as masturbation) by using or threatening physical violence[4] b) Attempt to force you to have sexual intercourse (oral, vaginal anal) or another similar sexual act (such as masturbation) by using or threatening physical violence[4] c) Forced you, or attempted to force you to engage in some kind of sexual activity when you were unable to defend yourself because you were sleeping, ill or under the influence of alcohol or drugs[4] d) Grabbed or touched you in a sexual way against your will or made you touch his/her body in a sexual way against your will[4]
Question 10: Has it ever happened, after you turned 18, that a person has done any of the following to you?	Physical violence: a) Threatened to hurt you with physical violence b) Hit you with their open palm (a slap), pulled your hair, pushed you etc. [4] c) Hit you with their fist or a hard object, kicked you, held you in a chockehold etc.[4] d) Caused you harm using a knife or a firearm[4]
Question 11: Has it ever happened, after you turned 18, that a person has done any of the following to you?	Psychological violence: a) That your partner (or former partner) systematically and repeatedly degraded, humiliated or otherwise violated your dignity or oppressed you verbally[4] b) That your partner (or former partner) systematically and repeatedly dominated you and decided who you could see, how much money you were allowed to have, when you could go out, what clothes you could wear etc.[4] c) That your partner (or former partner) systematically and repeatedly threatened to hurt him/herself or your children, to take the children and leave you, to brake your valuables, to tell others things you would like to keep secret etc[4] d) That you have been systematically and repeatedly bullied, violated or harassed by relatives or at your workplace, in school, in residential area etc[4]

1. Identical but separate sections addressed violence before 15 years and 15 through 17 years of age as well as if the violence was perpetrated by adults as oppose to peers
2. "Against your will" was added in the question regarding sexual violence between 15 through 17 years of age
3. Response alternatives were "No", "Yes, once", "Yes, several times"
4. Response alternatives were "No", "Yes, once", "Yes, several times", "Yes, many times"
5. Response alternatives were "No, Yes, No during the past 12 months, Yes it happened during the past 12 months"

Study III

To assess the outcome of this study, the lifetime prevalence of different forms of violence exposure among women and men in Sweden, the following variables were measured (the questions are displayed in Table 3):

Sexual violence in childhood: If participants answered "yes, once" to questions 1-4, alternative a-c it was classified as single incidents of non-rape sexual violence in childhood. If they answered "yes, several times" to the same questions and alternatives it was classified as multiple incidents of non-rape sexual violence in childhood. If they answered "yes, once" or "yes, several times" to questions 1-4 alternatives d-e it was specified has experiences of rape/attempted rape in childhood.

Physical violence in childhood: If participants answered "yes, once" to questions 5-8 alternative c it was classified ass less severe physical violence in childhood. If participants answered "yes, several times" or "yes, many times" to questions 5-8 alternative c, or "yes, once", "yes, several times" or "yes, many times" to alternative d it was classified as severe physical violence in childhood.

Psychological violence in childhood: If participants answered "yes, once" to questions 5-8 alternative a and b it was classified as less severe physical violence in childhood. If participants answered "yes, several times" or "yes, many times" to the same questions and alternatives it was classified as severe psychological violence in childhood.

Sexual violence in adulthood: If participants answered "yes" or "yes, during the past 12 months" to question 9 alternative d it was classified as exposure to non-rape sexual violence in adulthood. It was categorized as rape/attempted rape in adulthood if respondents answered "yes" or "yes, during the past 12 months" to question 9 alternative a-c.

Physical violence in adulthood: If respondents answered "yes" or "yes, during the past 12 months" to question 10 alternative b it was classified as less severe physical violence in adulthood. If they answered "yes" or "yes, during the past 12 months" to alternative c-d of the same question it was categorized as experiences of severe physical violence in adulthood.

Psychological violence in adulthood: If participants answered "yes" or "yes, during the past 12 months" to question 11 alternative a-d it was categorized as severe psychological violence in adulthood.

Study IV

As this study addressed sexual violence specifically against women, only responses from female respondents were included in the analysis. To assess the outcome for this study, exposure to sexual violence in adulthood, the following variables were measured (questions are displayed in Table 3):

Sexual violence in adulthood: The same procedure was used to categorized exposure to non-rape sexual violence and rape/attempted rape in adulthood as described for study III.

Sexual violence in childhood: If participants answered "yes, several times" to questions 1-4, alternative a-c or "Yes" to alternative d-e and were exposed at least once it was categorized as severe sexual violence.

Physical and psychological violence in childhood: The same procedure was used to categorized exposure to severe physical and severe psychological violence as described for study III.

The exposure variables applied included exposure before the age of 18 to sexual, physical or psychological violence or specific combinations of these. A majority of the respondents had been exposed to some type of childhood violence, making this the norm in the population. We therefore chose to operationalize for violence exposure that could be more traumatic, and for this reason, single experiences of less severe violence for each category were excluded from the exposure variables. The two final exposure variables included experiences of severe violence at any time before the age of 18. The first variable consisted of mutually exclusive groups of women exposed to 0, 1, 2 or 3 types of violence in childhood (sexual, physical, psychological) similar to the construct used by Felitti et al.[38] To differentiate between the different violence types with respect to risk of adult sexual violence exposure, a second composite variable was created with eight mutually exclusive groups exposed to severe forms of: (a) only sexual, (b) only physical (c) only psychological, (d) both sexual and physical, (e) both physical and psychological, (f) both sexual and psychological, (g) all three types of violence, or (h) none of these types of violence in childhood.

Except for age, the sociodemographic background variables were dichotomized: present marital status (married vs. unmarried); place of birth (Nordic vs. non-Nordic countries); educational level (college vs. less than college level); having received social welfare payments within the past 5 years (no vs. yes). Age was included in the logistic regression as a categorical variable with the age ranges 18-24, 25-34, 35-44, 45-54, 55-64, 65-74 years.

Statistics

Data were analyzed using the IBM Statistical Package for Social Sciences for Macintosh versions 14-24 (SPSS, Inc., Chicago, IL, USA). A p value of < 0.05 was considered to indicate a statistically significant difference.

Study I

Data are presented as number of observations (n) and frequencies (%). Bivariate associations were examined using cross-tabulations with the chi-square

test. Multivariate logistic regression was used to adjust for possible confounding factors, i.e. age, education and occupation, presented as crude and adjusted odds ratios (ORs and aORs) with a 95% confidence interval (CI).

Study II

Data are presented as number of observations (n) and frequencies (%). Bivariate associations were examined using the chi-square test.

Study III

Data are presented as frequencies (%). Weighted data were applied for descriptive statistics using the algorithm mentioned above to adjust for non-responders.

Study IV

Data are presented as frequencies (%). Associations between outcome variables (exposure to rape/attempted rape and non-rape sexual violence in adulthood, respectively) and the exposure variables (exposure to childhood violence) as well as background variables (age, place of birth, level of education, marital status, unemployment and social welfare payments) were examined using logistic univariate and multivariate regression analyses, and results are presented as odds ratios (OR) with 95% confidence intervals (CI). Before performing the logistic regression, we first examined associations between the background variables and the exposure variables. With the exception of educational level, all of the background variables studied had significant associations to childhood experiences of violence. We therefore performed both univariate and multivariate logistic regression analyses for exposure and background variable versus outcome variables to assess potential collinearity.

Ethical considerations

Studies I and II

The women were informed that participation was voluntary. They were assured confidentiality and gave their consent to participate by answering the questionnaire and allowing specially trained staff to interview them. The interview took place in the absence of the women's partners and the participants were offered counseling if needed, in accordance with current clinical practice. The interviewers provided a card with a plan of action for all women who reported exposure to violence. Women who needed help were offered immediate contact with specialized counselors at the National Centre for Knowledge on Men's Violence Against Women, a knowledge and resource centre that has a clinic for women subjected to violence at Uppsala University

Hospital. The women could choose if and when they wanted help. The interviewers were also encouraged to contact the counselors at the National Centre. The study was approved by the Regional Ethical Review Board in Uppsala (Dnr 2005/2019).

Studies III and IV

Respondents were informed that participation was voluntary and that by completing the online or paper version of the questionnaire they gave their informed consent to participate. As the questionnaire contained many questions about experiences and issues that might cause discomfort or bring up unpleasant memories, contact information was provided to the national telephone helpline, Sweden's National Women's helpline, and the Victim Support Sweden helpline at the beginning and end of the questionnaire. The study was approved by the Regional Ethical Review Board in Uppsala (Dnr 2011/156).

Results

Studies I and II

Of the 1517 women who received a questionnaire, 1286 women agreed to participate. Of those women, 60 did not state their age, educational level or occupation and were therefore excluded from the analyses. The age of the participants ranged from 15-55 years.

Study I

Among women seeking TOP 672 (89%) agreed to participate, 37 did not state their background characteristics and were therefore excluded from the analyses. The corresponding number among the women seeking contraceptive counseling who agreed to participate was 614 (81%), of those 23 women did not state their background characteristics and were therefore excluded. Background characteristics for the included participants are shown in Table 4.

Table 4: Characteristics of women seeking termination of pregnancy (TOP) and women seeking contraceptive counseling (CC)

	TOP *n* = 635	CC *n* = 591	*p*-value[a]
Age (years)			
15-19	112 (18%)	13 (2%)	0.000
20-30	307 (48%)	343 (58%)	
≥ 31	216 (34%)	235 (40%)	
Education			
Finished/unfinished nine-year compulsory school	147 (23%)	46 (8%)	0.000
Upper secondary school/High school	360 (57%)	331 (56%)	
University/College	128 (20%)	214 (36%)	
Occupation			
Student	224 (35%)	144 (24%)	0.000
Gainfully employed	298 (47%)	373 (63%)	
Works in the home/On parental leave/In search for work/On sick leave	113 (18%)	74 (13%)	
Number of previous abortions	247	155	0.000
One	155 (63%)	114 (74%)	
Two	54 (22%)	28 (18%)	
Three or more	38 (15%)	13 (8%)	

[a]Pearson's X^2-test

Intimate partner violence

Among the respondents, 29% of the women seeking TOP and 22% of the women seeking contraceptive counseling answered "yes" to any of the questions regarding experiences of intimate partner violence (IPV). The difference between the groups was significant and remained so after adjustment for age, educational level and current occupation (Table 5).

Table 5: Type of intimate partner violence, before and after adjustment for age, educational level and occupation among women seeking termination of pregnancy (TOP) and women seeking contraceptive counseling (CC)

	TOP		CC		Unadjusted		Adjusted[c]	
Type of intimate partner violence	*n*/total	%	*n*/total	%	OR	95%Cl	aOR	95%Cl
Physically or emotionally abused before 18 years of age (AAS[a])	30/630	5	18/587	3	1.581	0.9-3.0	1.284	0.7-2.4
Physically or emotionally abused ever (AAS)	157/633	25	98/591	17	1.659	1.3-2.2	1.703	1.3-2.3
Experience of physical violence during the past year (AAS)	31/632	5	11/589	2	2.710	1.4-5.4	2.304	1.1-4.8
Ever been sexually abused (AAS)	49/634	8	25/586	4	1.804	1.1-2.9	1.687	1.0-2.8
Experience of emotional violence (NorAQ[b])	142/364	22	106/588	18	1.312	1.0-1.7	1.209	0.9-1.6
Experience of physical violence (NorAQ)	152/632	24	100/588	17	1.545	1.2-2.0	1.601	1.2-2.1
Experience of sexual violence (NorAQ)	62/635	10	44/587	8	1.335	0.9-2.0	1.216	0.8-1.9
Total experience of intimate partner violence (answered "yes" to any of AAS or NorAQ)	186/635	29	132/591	22	1.440	1.1-1.9	1.474	1.1-1.9

[a]Abuse Assessment Screen. [b]Norvold Abuse Questionnaire. [c]Adjusted for age, education and occupation.

Women seeking TOP were more likely to report physical violence [adjusted OR (aOR) = 1.6, 95% CI 1.2-2.1], emotional or physical violence (aOR = 1.7, 95% CI 1.3-2.3) and experiences of IPV in general during the past year (aOR = 2.3, 95% CI 1.1-4.8). The results on experiences of sexual violence were somewhat ambiguous. There was a significant difference when the respondents answered an interview question on whether they had experienced sexual violence from an intimate partner (aOR=1.7, 95% CI 1.0-2.8), but the significant difference was less prominent when they replied to the detailed written question regarding experiences of sexual violence from an intimate partner (aOR1.2, 95% CI 0.8-1.9).

Intimate partner violence and history of TOP

Of the women who had previously undergone TOP, 35% answered "yes" to any of the IPV questions compared to 21% of those with no previous TOP ($p<0.001$). The differences remained after adjustments for confounding factors (aOR = 1.7, 95% CI 1.3-2.3). Experiences of physical violence during the past year did not differ (Table 6).

Table 6: Type of intimate partner violence among women who had one or more TOP previously compared with women who never had any TOP.

	One or more previous TOP		Never had TOP		Unadjusted		Adjusted[c]	
Type of intimate partner violence	*n*/total	%	*n*/total	%	OR	95%Cl	aOR	95%Cl
Physically or emotionally abused before 18 years of age (AAS[a])	24/387	6	24/816	3	2.182	1.2-3.9	1.741	0.9-3.2
Emotionally or physically abused ever (AAS)	118/388	30	134/822	16	2.244	1.7-3.0	1.847	1.4-2.5
Experience of physical violence during the past year (AAS)	17/388	4	24/819	3	1.518	0.8-2.9	1.441	0.7-2.8
Ever been sexually abused (AAS)	35/368	9	39/819	5	1.989	1.3-3.2	1.860	1.1-3.1
Experience of emotional violence (NorAQ[b])	110/387	28	135/821	16	2.018	1.5-2.7	1.758	1.3-2.4
Experience of physical violence (NorAQ)	108/388	28	140/818	17	1.868	1.4-2.5	1.557	1.2-2.1
Experience of sexual violence (NorAQ)	50/386	13	55/822	7	2.075	1.4-3.1	2.021	1.3-3.1
Total experience of intimate partner violence (answered "yes" to any of AAS or NorAQ)	137/388	35	176/823	21	1.999	1.5-2.6	1.714	1.3-2.3

[a]Abuse Assessment Screen. [b] Norvold Abuse Questionnaire. [c]Adjusted for age, education and occupation.

Intimate partner violence and repeated TOP

Women with repeated TOP answered "yes" to any of the IPV questions in 51% of the cases compared with 28% of those with only one previous TOP. Women with repeated TOP were more likely to report experiences of all types of intimate partner violence. Experiences of physical violence before 18 years of age and physical violence during the past year did not differ between those two groups (Table 7).

Table 7: Type of intimate partner violence among women with repeated termination of pregnancy (TOP) and women with one termination of pregnancy previously

	Repeated TOP[a]		One TOP previously		p-value[d]
Type of intimate partner violence	*n*/total	%	*n*/total	%	
Physically or emotionally abused before 18 years of age (AAS[b])	9/119	8	15/268	6	0.459
Emotionally or physically abused ever (AAS)	52/119	44	66/263	25	0.000
Experience of physical violence during the past year (AAS)	7/119	6	10/259	4	0.337
Ever been sexually abused (AAS)	32/119	27	39/269	15	0.002
Experience of emotional violence (NorAQ[c])	50/119	42	60/268	22	0.000
Experience of physical violence (NorAQ)	51/120	43	57/268	21	0.000
Experience of sexual violence (NorAQ)	24/119	20	26/267	10	0.005
Total experience of intimate partner violence (answered "yes" to any of AAS or NorAQ)	61/120	51	76/268	28	0.000

[a]Two or more induced abortions previously to the study visit. [b]Abuse Assessment Screen. [c]Norvold Abuse Questionnaire, [d]Pearson's X^2-test

Study II

Sexual violence

Among the participants (n=1226), 326 (27%) answered "yes" to any of the questions regarding experiences of sexual violence during the interviews or in the questionnaire. In the questionnaire 310 (25%) of the women answered "yes" to some or all questions regarding experiences of sexual violence, of which 220 (71%) of the women stated that the perpetrator was a non-partner. Sexual violence during the past year was reported by 38 (3%) of the participants.

Table 8. Distribution of study participants by lifetime sexual violence exposure, a series of background characteristics, and experience of emotional and/or physical violence from a partner or former partner

Characteristics	Experience of sexual violence n (%)	No experience of sexual violence n (%)	Missing values	p-value[a]
Current age (years)				0.156
15-19	42 (34)	83 (66)		
20-30	171 (26)	479 (74)		
31-	113 (25)	338 (75)		
Relationship			27	<0.001
Not in relationship	85 (35)	156 (65)		
Less than 1 year	69 (31)	159 (69)		
1-5 years	106 (26)	295 (74)		
Over 6 years	57 (18)	262 (82)		
Place of birth			22	0.131
Scandinavia	279 (26)	813 (74)		
Other than Scandinavia	36 (32)	76 (68)		
Education				0.024
< 9 years of school	64 (33)	129 (67)		
> 9 years of school	262 (25)	771 (75)		
Occupation				0.037
Gainfully employed	159 (24)	512 (76)		
Student	113 (31)	255 (69)		
Unoccupied[b]	54 (29)	133 (71)		
Experience of psychical and/or physical violence from a partner or former partner			10	<0.001
Yes	151 (47)	170 (53)		
No	179 (20)	716 (80)		

[a]Pearson's X^2-test. [b]Unemployed, parental leave, sick leave.

Background characteristics

Table 8 shows background characteristics among the participants. It was more common that women with experiences of sexual violence had nine or less years of education (p=0.024), were students or without occupation (p=0.037), and were not in a current relationship (p<0.001). Women with no experiences of sexual violence were more likely to be in longer relationships (p<0.001).

Table 9. Distribution of participants by sexual violence perpetrator and type of intimate partner violence

Type of intimate partner violence	n	Experience of non-partner sexual violence n (%)	No experience of non-partner sexual violence n (%)	p-value[a]
Interviews				
- Have you ever experienced physical or psychological violence from a present or former partner?	npSV: 220 no npSV: 909	58 (26)	138 (15)	<0.001
- Have you during the past year been slapped, kicked, shoved or in other ways harmed by a present or former partner?	npSV: 219 no npSV: 908	10 (5)	21 (2)	0.067
Questionnaire				
- Experience of psychological violence from a partner or former partner	npSV: 218 no npSV: 909	67 (31)	121(13)	<0.001
- Experience of physical violence from a partner or former partner	npSV: 217 no npSV: 908	75 (24)	177 (13)	0.003
- Total experience of intimate partner violence (interviews + questionnaire)	npSV: 220 no npSV: 911	69 (31)	281 (20)	<0.001

[a]Pearson's chi-square test.
npSV = experiences of non-partner sexual violence.

Non-partner sexual violence

Table 9 shows that women with experiences of non-partner sexual violence were more likely to report experiences from a present or former partner compared to women with no experiences of non-partner sexual violence ($p<0.001$). There were no significant differences between the groups regarding experiences of IPV during the past years.

Studies III and IV

In total, 10 337 individuals participated in the survey, giving a response rate of 52% (5681 women and 4656 men) with low levels of item non-response. The overall non-response rate was disproportionately high for individuals who were young, born outside the Nordic countries or had low level of education. The age of the participants ranged from 18-74 years.

Study III

Table 10 shows the demographic characteristics of the participants.

Table 10. Demographic characteristics of the respondents in percent

Characteristic	Women (n=5681) %	Men (n=4656) %
Age		
18-24	11.2	9.4
25-34	15.1	14.2
35-44	18.6	17.0
45-54	20.1	18.3
55-64	19.8	21.6
65-74	15.2	19.6
Marital status		
Married or registered partner	68.5	68.6
Unmarried	31.5	31.4
Educational level		
College	54.1	43.3
Secondary school	31.7	38.1
Primary school	14.2	18.6
Country of birth		
Sweden	88.5	90.0
Other European country	7.5	6.3
Outside Europe	4.0	3.7

Sexual violence in childhood

More women (26.4%) than men (11%) were exposed to sexual violence in childhood. It was more common for both women and men to experience multiple incidents of non-rape sexual violence before 15 years of age than between 15-17 years of age and the perpetrator was equally often an adult as a peer. Women experienced rape/attempted rape to the same extent before 15 years and between 15-17 years of age. While the perpetrator could equally be an adult or peer before they were 15 years of age, it was more common that the perpetrator was a peer when they were exposed between 15-17 years of age (Table 11).

Sexual violence in adulthood

Among women 22.1% were exposed to sexual violence as adults compare to 4.5% of men, with the perpetrator often being a person other than a partner or former partner for both groups. More women (10.8%) than men (1.3%) experience rape/attempted rape and it was equally common that the perpetrator was a partner/former partner or another person (Table 12).

Physical violence in childhood

More men (59.3%) than women (39.3%) experienced any form of physical violence. While it was more common for women to have experiences of less severe physical violence before 15 years of age perpetrated by an adult, the

men reported high prevalence's of all types of physical violence before 18 years of age, often perpetrated by a peer (Table 11).

Physical violence in adulthood

Both women (18.4%) and men (20.4%) were exposed to physical violence in adulthood to a similar extent. While women more often reported a partner or former partner as perpetrator, the men more often reported that the perpetrator was a non-partner (Table 12).

Psychological violence in childhood

A great number of both women (58.1%) and men (69.2%) had experiences of psychological violence in childhood. It was more common that the perpetrator was a peer than an adult among men, a difference that was less marked among women (Table 11).

Psychological violence in adulthood

More women (21.8%) than men (9.4%) were subjected to psychological violence as adults. For both groups the perpetrators were three times more often a partner or former partner than another person (Table 12).

Severe violence exposure over the lifespan

Over 50% of both women and men had experienced at least one type of severe violence during their lifetime. Severe sexual violence was more than three times more common among women compared to men (23.2% versus 6.5%, respectively) while experiences of severe physical violence were twice as common among men (21.3% versus 41.3%, respectively). Differences between the groups were less pronounced for lifetime experiences of severe psychological violence (see Table V, paper III).

For all three types of violence there was a clear overlap between exposure at different ages, for different severity of violence and between different perpetrators.

Table 11. Weighted frequencies in percent for exposure to different types of violence before 18 years of age in total and with respect to perpetration by adult or peer

	Women (n=5681)		Men (n=4656)	
Violence in childhood	%	Item non-response %	%	Item non-response %
Any sexual violence in childhood:				
	26.4	4.3	11.0	2.8
Single incidents of non-rape sexual violence under 15 years[a]:				
Total	13.4	1.9	6.0	1.7
By adult	8.8	1.0	3.8	0.9
By peer	5.5	1.7	2.5	1.4
Single incidents of non-rape sexual violence 15-17 years[a]:				
Total	7.0	3.3	2.2	2.7
By adult	3.7	2	1.5	1.8
By peer	3.6	2.6	0.8	2.0
Multiple incidents of non-rape sexual violence under 15 years[b]:				
Total	8.6	2.6	2.9	1.9
By adult	4.6	1.2	1.4	0.9
By peer	4.6	1.9	1.8	1.5
Multiple incidents of non-rape sexual violence 15-17 years[b]:				
Total	4.7	3.7	1.3	2.8
By adult	2.0	2.2	0.7	1.9
By peer	3.2	2.8	0.7	2.0
Rape or attempted rape under 15 years[c]:				
Total	8.0	2.9	3.4	2.2
By adult	4.0	1.5	1.8	1.0
By peer	4.8	2.1	1.9	1.9
Rape or attempted rape 15-17 years[c]:				
Total	7.9	3.8	1.7	3.2
By adult	3.3	2.4	1.0	2.1
By peer	5.6	2.9	0.9	2.3
Any physical violence in childhood:				
	39.3	4.5	59.3	3.3
Less severe physical violence under 15 years[d]:				
Total	33.8	4.6	52.7	4.9
By adult	24.7	2.4	32.4	2
By peer	15.4	2.7	37.0	2.4
Less severe physical violence 15-17 years[d]:				
Total	16.3	3.8	27.3	3.6
By adult	11.5	2.5	13.1	2.5
By peer	7.3	2.8	21.2	2.5
Severe physical violence under 15 years[e]:				
Total	13.3	4.7	31.3	3.8
By adult	7.4	2.9	8.5	2.8
By peer	7.6	2.9	27.5	2.9
Severe physical violence 15-17 years[e]:				
Total	7.5	4.3	20.6	4.4
By adult	4.5	2.8	5.8	2.9
By peer	4.2	3.0	18.4	2.9
Any psychological violence in childhood:				
	58.1	2	69.2	1.6
Less severe psychological violence under 15 years[f]:				

Total	40.2	1.9	55	1.3
By adult	22.5	1.6	30.5	1.4
By peer	27.9	1.8	42.0	1.3
Less severe psychological violence 15-17 years[f]:				
Total	29.8	2.3	42.9	2.1
By adult	17.8	1.8	22	1.6
By peer	19.4	2.0	34.5	2.0
Severe psychological violence under 15 years[g]:				
Total	27.6	2.4	27.4	2.1
By adult	14.8	1.8	12.0	1.7
By peer	19.5	2.0	21.7	1.5
Severe psychological violence 15-17 years[g]:				
Total	17.8	2.7	14.4	3.0
By adult	11.2	2.0	6.9	2.0
By peer	10.5	2.2	10.7	2.2

[a]Having been forced to pose naked, caressed in a sexual way or similar acts once. [b]Having been forced to pose naked, caressed in a sexual way or similar acts several times. [c]Forced oral, vaginal or anal intercourse or attempts at such. [d]Single incidents of having had one's hair pulled, being pushed in a way that was painful, or being slapped. [e]Ever having been hit with a fist, kicked, injured with a knife or often having had one's hair pulled, being pushed in a way that was painful, being slapped, or subjected to any other type of physical violence. [f]Single incidents of having been subjected to treatment perceived as degrading, oppressive, devaluating, humiliating or bullying. [g]Repeated incidents of having been subjected to treatment perceived as degrading, oppressive, devaluating, humiliating or bullying

Table 12. Weighted frequencies in percent for exposure to different types of violence in adulthood in total and with respect to perpetration by partner/former partner or other

	Women (n=5681)		Men (n=4656)	
Violence from 18 years of age and older	%	Item non-response %	%	Item non-response %
Any sexual violence as adult:				
Total	22.1	2	4.5	2.3
By partner/former partner	9.8	15.4	1.1	5.7
By other	17.6	7.4	3.8	3
Non-rape sexual violence as adult[a]:				
Total	18.9	1.9	4.1	2
By partner/former partner	7.8	13.7	1.0	5
By other	15.6	5.8	3.5	2.6
Rape/attempted rape as adult[b]:				
Total	10.8	1.9	1.3	1.8
By partner/former partner	6.4	6.6	0.5	2.6
By other	7.2	5.8	1.0	2.1
Any physical violence as adult:				
Total	18.8	2.2	20.4	2.5
By partner/former partner	14.8	6.8	6.5	17.1
By other	7.3	14.3	17.1	6.4
Less severe physical violence as adult[c]:				
Total	16.4	1.9	14.4	2.2
By partner/former partner	13.4	5.3	5.5	11.5
By other	5.7	13.0	11.3	5.6
Severe physical violence as adult[d]:				
Total	9.5	2.4	14.7	2.4
By partner/former partner	7.8	4.2	3.6	13.7
By other	3.5	8.5	13.0	4.4
Severe psychological violence as adult[e]				
Total	21.8	2.7	9.4	2.9
By partner/former partner	19.7	2.5	8.2	2.4
By other	5.4	2.4	2.6	2.5

[a]Grabbed or touched in a sexual way against one's will or made to touch someone else's body in a sexual way against one's will

[b]Forced oral, vaginal or anal intercourse or attempts at such

[c]Having had one's hair pulled, being pushed in a way that was painful, or being slapped

[d]Ever having been hit with a fist, kicked, injured with a knife or firearm

[e]Repeated incidents of having been subjected to treatment perceived as degrading, oppressive, devaluating, humiliating or bullying. Less severe forms of psychological violence were not included in the questionnaire.

Study IV

Sexual violence in adulthood

Of the participating women 18.6% reported experiences of non-rape sexual violence and 10.2% reported experiences of rape/attempted rape in adulthood.

Violence in childhood

Of the participants 16.3% reported experiences of sexual, 13.6% of physical, and 28.6% of psychological violence in childhood (Table 13).

Table 13. Descriptive statistics for all variables used in the analyses given as frequencies in numbers (n) and percent (%) of all women respondents (n=5681)

Outcome variables	n	%	Non-response %
Non-rape sexual violence in adulthood[a]	1043	18.6	1.5
Rape/attempted rape in adulthood[b]	569	10.2	1.4
Violence in childhood			
Severe sexual violence in childhood[c]	888	16.3	4.1
Severe physical violence in childhood[d]	726	13.6	6.1
Severe psychological violence in childhood[e]	1582	28.6	2.6
Combined exposure variables[f,g]			9.7
Childhood violence exposure variable one			
No severe violence in childhood[f,g]	3200	62.4	-
Combined severe violence in childhood one type[f]	1117	20	
Combined severe violence in childhood two types[f]	571	11.1	
Combined severe violence in childhood three types[f,g]	240	4.2	-
Childhood violence exposure variable two			
No severe violence in childhood[f,g]	3200	62.4	-
Only severe sexual violence in childhood[g]	324	6.3	-
Only severe physical violence in childhood[g]	109	2.1	-
Only severe psychological violence in childhood[g]	684	13.3	-
Severe sexual and physical violence in childhood[g]	37	0.7	-
Severe sexual and psychological violence in childhood[g]	221	4.3	-
Severe physical and psychological violence in childhood[g]	313	6.1	-
Sexual, physical and psychological violence in childhood[f,g]	240	4.2	-
Background variables			
Present marital status, unmarried	1761	31.5	1.5
Place of birth, non-Nordic country	416	7.7	4.4

Education, below college level	2580	45.8	0.9
Ever social welfare payments past 5 years	360	6.9	7.7
Ever unemployed past 5 years	1656	31.1	6.2
Age			
18-24	638	11.2	-
25-34	855	15.1	-
35-44	1055	18.6	-
45-54	1142	20.1	-
55-64	1126	19.8	-
65-74	865	15.2	-

[a]Non-rape sexual violence in adulthood was defined as being touched or caressed in a sexual way against one's will or being forced to touch somebody in a sexual way. [b]Rape/attempted rape in adulthood was defined as being forced into oral, vaginal or anal intercourse or attempts to do so, or any such act or attempt when unable to defend oneself. [c]Forced oral, vaginal or anal intercourse or attempts at such, or other forms of sexual acts repeated times. [d]Ever having been hit with a fist, kicked, injured with a knife or often having had one's hair pulled, being pushed in a way that's painful, being slapped, or subjected to any other type of physical violence. [e]Having been subjected to repeated treatment perceived as degrading, oppressive, devaluating, humiliating or bullying. [f,g]Two variables, each having with mutually exclusive groups of respondents.

Associations between childhood violence and non-rape sexual violence in adulthood

Women with experiences of any type of violence during childhood were at higher odds of non-rape sexual violence as adults compared to women who did not report childhood violence (univariate OR between 2.2 and 10.6 for different combinations of violence). Sexual violence in childhood conferred a higher odds ratio for non-rape sexual violence in adulthood (OR 3.7) compared to physical violence in childhood (OR 2.2) or psychological violence in childhood (OR 2.6). All combinations (physical/psychological violence in childhood) that included sexual violence in childhood were associated with even higher odds of non-rape sexual violence in adulthood, with exposure to all three types of violence in childhood having the highest odds ratio (OR 10.6) (Table 14).

Table 14. Univariate and multivariate logistic regression-derived odds ratios (OR) with 95% confidence intervals (CI) for non-rape sexual violence in adulthood based on childhood exposure to violence and background variables.

Non-rape sexual violence in adulthood				
	Univariate		Multivariate	
Childhood violence exposure variable one	OR	95 % CI	OR	95 % CI
Combined severe violence childhood 1 type	2.8***	2.4-3.4	2.5***	2.1-3.1
Combined severe violence childhood 2 types	4.2***	3.5-5.2	4.0***	3.2-5.0
Combined severe violence childhood 3 types	10.6***	8.0-14.1	11.4***	8.3-15.7
Childhood violence exposure variable two				
Only severe sexual violence	3.7***	2.9-4.8	3.6***	2.5-4.3
Only severe physical violence	2.2**	1.4-3.7	2.0**	1.6-3.9
Only severe psychological violence	2.6***	2.1-3.2	2.2***	1.6-2.4
Severe sexual and physical violence	5.8***	3.0-11.4	7.7***	4.0-16.7
Severe sexual and psychological violence	6.3***	4.7-8.4	5.5***	3.8-7.1
Severe physical and psychological violence	3.0***	2.3-4.0	2.9***	2.5-4.4
Sexual, physical and psychological violence	10.6***	8.0-14.0	11.4***	8.0-15.5
Present marital status, unmarried	1.7***	1.5-2.0	1.5***	1.3-1.9
Place of birth, non-Nordic country	0.6*	0.4-0.8	0.4***	0.3-0.7
Education below college level	0.6***	0.5-0.7	0.6***	0.5-0.7
Ever social welfare payments past 5 years	1.9***	1.4-2.4	1.3	1.0-1.8
Ever unemployed past 5 years	1.5***	1.3-1.7	1.1	0.9-1.3
Age				
18-24	1.0 (ref)		1.0 (ref)	
25-34	1.3	1.0-1.6	1.3	0.9-1.9
35-44	1.0	0.7-1.2	1.1	0.8-1.6
45-54	1.0	0.8-1.2	1.1	0.8-1.6
55-64	0.7*	0.5-0.9	0.9	0.6-1.3
65-74	0.4***	0.3-0.5	0.6*	0.4-0.9

*p<0.05, **p<0.01,***p<0.001

Associations between childhood violence and rape/attempted rape in adulthood

Odds ratios for rape/attempted rape in adulthood followed a similar pattern to that of non-rape sexual violence with respect to the exposure variable (Table 15). Again, sexual violence in childhood was more strongly associated with rape/attempted rape in adulthood than other types of childhood violence, as were combinations that included sexual violence in childhood.

Associations between background characteristics and sexual violence in adulthood

All types of sexual violence, non-rape and rape/attempted rape, during adulthood were more common among women who were unmarried, had received social welfare payments or had been unemployed. Non-rape sexual violence was less likely to be reported by women who had below college level education, were age 55 or above or born outside the Nordic countries. Rape/attempted rape was also less common among women who did not have a college level education and those in the oldest age group. No significant associations were found between country of origin and experiences of rape/attempted rape in adulthood.

Adding the background variables in the multivariate analysis did not substantially affect the associations between childhood violence exposure and non-rape sexual violence as well as rape/attempted rape in adulthood, suggesting that collinearity was minor.

Table 15. Univariate and multivariate logistic regression-derived odds ratios (OR) with 95% confidence intervals (CI) for rape/attempted rape in adulthood based on childhood exposure to violence and background variables.

Rape/attempted rape in adulthood				
	Univariate		Multivariate	
Childhood violence exposure variable one	OR	95 % CI	OR	95 % CI
Combined severe violence childhood 1 type	3.0***	2.3-3.8	2.6***	2.0-3.4
Combined severe violence childhood 2 types	6.0***	4.6-7.7	5.0***	3.8-6.6
Combined severe violence childhood 3 types	14.1***	10.4-19.2	12.9***	9.2-18.1
Childhood violence exposure variable two				
Only severe sexual violence	4.5***	3.2-6.2	4.1***	2.9-5.8
Only severe physical violence	2.5*	1.3-4.6	2.2*	1.1-4.2
Only severe psychological violence	2.5***	1.8-3.2	2.0***	1.4-2.7
Severe sexual and physical violence	5.5***	2.5-12.3	5.7***	2.5-13.1
Severe sexual and psychological violence	9.2***	6.7-12.8	7.7***	5.4-11.1
Severe physical and psychological violence	4.1***	2.9-5.9	3.3***	2.3-4.8
Sexual, physical and psychological violence	14.1***	10.4-19.2	12.8***	9.2-18.3
Present marital status, unmarried	1.9***	1.6-2.3	1.6***	1.3-2.0
Place of birth, non-Nordic country	1.0	0.8-1.5	0.7	0.4-1.1
Education, below college level	0.7***	0.5-0.7	0.7*	0.6-0.9
Ever social welfare payments past 5 years	2.6***	2.0-3.4	1.8**	1.3-2.5
Ever unemployed past 5 years	0.6	0.4-0.9	1.3*	1.1-1.7
Age				
18-24	1.0 (ref)		1.0 (ref)	
25-34	1.2	0.9-1.7	1.0	0.7-1.6
35-44	1.1	0.8-1.5	1.1	0.7-1.7
45-54	1.1	0.8-1.5	1.1	0.7-1.7
55-64	0.9	0.8-1.3	1.1	0.7-1.8
65-74	0.6*	0.4-0.9	0.8	0.5-1.3

*p<0.05, **p<0.01, ***p<0.001

Discussion

Implications

Study I

Termination of pregnancy is a common procedure in Sweden with approximately 36 000 women receiving such procedures every year.[57] Our results showed that 29% of women seeking TOP and 22% of women seeking contraceptive counseling reported experiences of intimate partner violence. Both groups included women who had had one or more induced abortions before the study. Of those who had ever undergone TOP, 35% reported IPV compared with 21% of those with no previous TOP, even after controlling for possible confounders, which strengthens the associations between IPV and TOP. These results are comparable to those presented by other researchers. Wu et al. reported the presence of IPV among 22.6% of women seeking TOP,[58] Leung et al. reported IPV among 27.3% of women seeking TOP[59] and Glander et. al found that 39.5% reported a lifetime history of IPV among women seeking TOP.[43] Additional studies have shown that IPV is a strong predictor for TOP and that women who reported IPV were more likely to have induced abortion.[60-64]

The prevalence of IPV among the group seeking contraceptive counseling was also considerably high. This is in accordance with a study including comparable groups, where there was no difference reported in the prevalence of IPV between women seeking TOP compare to women seeking contraceptive counseling.[65] Women with repeated TOP in our study had a high prevalence (51%) of experiences of intimate partner violence. Other studies have also shown a higher risk of IPV among women with repeated TOP. [58,66]

Women in the TOP group were more likely to report physical violence during the past year. This is consistent with other studies that have shown a high prevalence of IPV during the past year among women seeking TOP. [67-69]

The reasons that women seeking TOP have a significantly higher rate of exposure to IPV might be several. Women exposed to IPV may lack control over their own sexuality or not be allowed the use of contraception and therefore choose to terminate an unwanted pregnancy, or they may be worried that future children can be witness of, or exposed to violence themselves.[70]

Adolescents can be especially vulnerable to intimate partner violence, as it can lead to sexual health problems with lifelong consequences, including TOP.[16,71]

This study was conducted in a Swedish population but we think that the results can be representative for other countries were the abortion laws are similar. We believe that this study has important clinical implications. If we presume that almost a third of all women seeking TOP have a lifetime experience of IPV, approximately 10 000 women seeking induced abortion in Sweden each year would have been exposed to violence from a present or former partner. Since the prevalence of IPV among non-TOP seeking women also was high we can assume that the number of women who might have been subjected to IPV represents a large proportion of the women in Sweden. Health-care providers can play a central role in identifying women subjected to sexual, physical and psychological violence.[32] Our results support those results. Health-care providers in family planning units have a major opportunity to approach women and inquire about IPV, in an effort to prevent some of the destructive consequences of violence.

Study II

Experiences of sexual violence were reported by 27% of the participants in this study. This rate is in line with other prevalence studies in Sweden, the Nordic countries and Europe.[14,16,72]

About 15% of the participants specified that they had experienced sexual violence before 18 years of age. This is in accordance with global and European prevalence studies.[14,73]

In this study, the prevalence of non-partner sexual violence among the participants was higher (18%) than the respective estimated prevalence of non-partner sexual violence globally (7.2%)[13] and in the European Union countries (6%).[14] In addition to acquaintance, friend or unknown persons, etc. family members that committed sexual violence were also included as non-partner perpetrators. The higher prevalence of non-partner sexual violence in our study is in line with the large number of participants who reported exposure to sexual violence when they were younger than 18 years of age.

Women with experiences of sexual violence in our study reported lower educational level, were students or unoccupied compared to women without experiences of sexual violence. Socioeconomic status was thus strongly associated with experiences of sexual violence in this setting in Sweden, in line with studies from other countries.[74]

The high prevalence of sexual violence among teenagers in our study raises the question about the need for vigorous preventive efforts in this group.

Of the women who confirmed experiences of non-partner sexual violence in particular, 31% stated that they also had lifetime experiences of psychological and/or physical violence from an intimate partner. This could be explained by

the fact that the majority of the women in our study reported experiences of sexual violence when they were younger than 18 years of age, and that one of the consequences of violence exposure in childhood is the risk of lifetime co-occurrence of violence.[75-76]

Experiences of sexual violence were common among women participating in this study. Many of the respondents were young when they were exposed to violence and lifetime co-occurrence of violence was common. Thus, the results of this study have significant clinical implications. Identification of exposed women within the health-care system would not only enable the development of effective interventions for treatment but also a possibility to prevent future violence.

Study III

Despite decades of focus on universal support and welfare in Sweden, this study demonstrates that experiences of violence in childhood, adolescence and adulthood are common.

Over one fourth of women and more than one tenth of men reported exposure to any type of sexual violence in childhood. These rates are in line with previous international comparisons of the lifetime prevalence rates of childhood sexual abuse, which also show marked gender differences.[22] Sexual violence was particularly prevalent during the period of 15-17 years of age, as seen in previous studies as well.[77]

A majority of men and over a third of women reported exposure to physical violence before the age of 18. In a previous meta-analysis, the global prevalence of physical child abuse ranged from 14.3%-54.8%.[78] The definition of physical violence used in that study may be most comparable to exposure to more severe violence perpetrated by an adult, which was reported by about 10% of the women and men in the present study. With regard to peer-perpetrated physical violence, the rates found here are similar to those reported by Finkelhor et al among 14-17-year-olds in the United States.[79]

Psychological violence during childhood was reported by over half of both women and men. Severe psychological violence was reported at equal rates for both genders. In a previous meta-analysis on the global prevalence of emotional child abuse, defined as confinement or habitual humiliation by an adult caretaker, rates ranged from 11.3%-46.7%.[80] This is most closely likened to our findings regarding severe psychological violence perpetrated by an adult, which was reported by about 20% of the women and 15% of the men in the present study. Rates of exposure to psychological violence in childhood by a peer were higher in the present study than that reported for emotional bullying (22%) in a previous study among youth in the United States.[81]

Exposure to violence in adulthood differs in some ways from that seen in childhood. All types of physical violence are markedly less prevalent in adulthood for both sexes compared to childhood. While women continued to be

exposed to psychological and sexual violence as adults, the exposure for men in general decreased markedly. Severe psychological violence was equally prevalent among women during adulthood and in childhood, as were experiences of sexual violence, including more severe forms. However, the rates of psychological and sexual victimization are substantially lower for men in adulthood both compared to women and compared to exposure in childhood. Experiences of rape/attempted rape in adulthood were nearly ten times more common among women compared to men.

It is difficult to compare prevalence rates in studies, due to differences in methodology. However, the present results suggest that violence in general is as prominent in Sweden as in other parts of the world.[22,82-83] Over 50% of the participating women and men had been subjected to more severe forms of sexual, physical or psychological violence at some point in their lives. This has also been shown for other Nordic and European countries in recent studies among adults at nearly the same time.[22,84]

Sweden is generally regarded as a relatively non-violent country, in an international context. This may be true regarding corporal punishment of children, however the results presented here suggest that experiences of violence, in childhood and in adulthood, are common among Swedish women and men. Our results may have important implications for violence prevention strategies, which despite progress in gender equality and low levels of corporal punishment have not caused a decrease in the amount of violent crimes in Sweden over the past few decades.[85- 86]

Study IV

The results of this study showed that many women in Sweden had experiences of sexual violence as adults. The odds ratio for sexual victimization in adulthood seemed to heavily increase if the women had experiences of childhood violence, particularly sexual violence in childhood or exposure to several types of childhood violence. Those findings are in accordance with other studies that have demonstrate a high risk for revictimization in adulthood among women subjected to sexual violence during childhood and adolescence.[75,84, 87-88] Physical and psychological childhood violence were also associated with a higher risk of exposure to sexual violence in adulthood, as seen in other studies,[89-91] which is partly at odds with a study that showed that child sexual abuse, but not child physical abuse, was related to adult rape.[92] Exposure to multiple types of violence gave higher odds ratios in a graded manner for sexual violence exposure in adulthood in our study. Experiences of childhood sexual violence and rape/attempted rape in adulthood had the strongest connections, especially for women exposed to combinations of childhood violence where sexual violence was included.

Unmarried women, and women ever having been unemployed or received social welfare benefits had a slightly and significantly elevated odds ratios for

exposure to rape/attempted rape in adulthood. Low socioeconomic status (SES) is a known risk factor for sexual violence among women, but these associations may also have other explanations including mental illness, cognitive disability or substance abuse, all of which have previously demonstrated associations to sexual violence among women and are overrepresented among those with low SES.[22, 36] However, the direction of this association may be the opposite, given that child sexual abuse is clearly associated with poor health outcomes and relational problems later in life.[93] The connection between these factors and the risk of sexual violence in adulthood is likely multifactorial and should be further assessed.

It was less common that women with education below college level were exposed to non-rape sexual violence in adulthood in this study. That was unexpected, given that we found a connection between lower levels of education and sexual violence in study II. Furthermore, low educational levels have commonly been associated with greater exposure to violence of all types and sexual violence in particular.[94] The fact that women with differing levels of education or different life experiences may have perceived the questions differently, may be a contributing factor. Previous studies among female college students have though shown high rates of sexual victimization during that specific period in their lives and high alcohol consumption among both victims and perpetrators has been suggested to be a contributing factor.[22,95] Women with origin in a non-Nordic country were less exposed to non-rape sexual violence in adulthood, whereas experiences of rape/attempted rape during adulthood seemed to distribute similarly among women regardless of country of origin. Other studies have shown that women in the Nordic countries have higher rates of sexual violence exposure than women in non-Nordic countries.[73,96] The suggested contributing factors to these differences included higher proportion of women in the workplace and otherwise outside the home in the Nordic countries, as well as a greater readiness to identify sexual acts of violence as such, even within a partner relationship and to report such acts to the police.

Identifying risk factors for sexual violence is paramount. These can be used as targets for prevention of sexual violence at the individual, community and societal level.[97-98] The results of our study, together with results from previous research, may contribute in that area. It is important to continue such preventive efforts as rates of sexual violence among women in Sweden remain high and many of the factors incurring increased risk of sexual violence persist.

Methodological considerations

The studies in this thesis were of a cross-sectional nature. While multiple variables were measured, a limitation could be that the studies were carried out at a specific point in time with fixed responses to complicated issues without contextual factors, and with no possibility to prove causality. The surveys used in these studies were in Swedish. Despite our attempts to attain a representative sample, it is likely that by not translating the questionnaires into other languages we failed to include a number of immigrants who did not speak Swedish. This should prompt repeated translated surveys to follow up the current status of violence exposure in Sweden.

Study I and II

Study I and II focused on self-reported prevalence of intimate partner violence and sexual violence among a subgroup of women seeking health-care services in a specific setting. A limitation of the studies could be the participant's self-reports regarding experiences of different types of violence, but by asking specifically structured questions about violence, we minimized the risk of misinterpretations regarding definitions of violence. Adding an interview also helped to clarify potential questions of definitions among the participants. The fact that the interviews were performed by different health-care providers could however be a source of bias. Another possible limitation could be that we included an equal number of controls and cases. A larger number of controls could have given the studies greater power. Nevertheless, the associations were detected. Among the strengths of the studies are the large number of participants, that all women seeking TOP and a representative selection of women seeking contraceptive counseling were approached and that the response rate was high. The arbitrary chance selection of the women seeking contraceptive counseling could be a potential weakness. The studies data were collected some years ago, but there have been no big legislative or policy changes during this period and studies conducted at a later time showed similar results implying that prevalence rates of IPV among women seeking TOP continue to be high.[44] Family planning units are structured in similar ways throughout Sweden, but using a family planning unit from only one region for recruitment may have affected the degree of generalizability of the findings. The impact of the exclusion of women who did not spoke Swedish on the results is difficult to hypothesize about. In previous studies were an interpreter was present during the interviews of women seeking termination of pregnancy, 38% of participating women were immigrants, and 29% of adolescents had an immigrant background.[99-100] By including translated questionnaires we could have increased the number of participating women from non-Nordic countries. Based on the literature, associations present in this study have been

reported in other cultures and thus are not expected to differ greatly in immigrant populations.[13]

Study III and IV

Study III focused on self-reported prevalence of different types of violence and study IV on associations between sexual violence in adulthood and exposure to childhood violence and sociodemographic factors. The studies were part of a research project developed at the National Centre for Knowledge on Men's Violence against Women and aiming at characterizing lifetime experiences of violence in the Swedish population. Strengths of the studies include a large sample size, a nationally representative sample and low internal dropout. The questionnaire design included multiple questions about the different types of violence at different ages and by different perpetrators. The ability to merge the survey data with registry data on the women's sociodemographic and socioeconomic characteristics adds to the strength of the analyses.

The results of these studies may have been affected by the fact that the response rate was 52%. Statistics Sweden did however an extensive analysis of non-responders which adds to the robustness of the data by adjusting for underrepresented groups. The survey was carried out in 2012 which could result in recent trends in violence exposure may have been missed. The possible presence of different types of bias, including recall bias and social acceptability bias must be acknowledged, the extent and effects of which cannot be estimated.

Less well-educated women born outside the Nordic countries were underrepresented in this material, which may have affected the results to some extent.

Conclusions

Although participating women seeking a family planning unit had a high prevalence of intimate partner violence, women seeking TOP and women with repeated TOP were more exposed to IPV compared to women seeking contraceptive counseling. This strengthens the associations between TOP and IPV and confirms the findings of previous research, that health-care settings are suitable for detecting women exposed to violence (study I).

Many of the participants at the family planning unit reported experiences of sexual violence. Several of the women were exposed at a young age and a number of women with experiences of non-partner sexual violence had also experienced IPV at some point in their life. This underscores the need for prevention efforts targeting adolescents (study II).

Women where more exposed to sexual violence both in childhood and adulthood than men. Exposure to physical violence did not differ between genders in adulthood, but the women were more often subjected to physical violence by an intimate partner, whereas the perpetrator of physical violence among men during childhood and adulthood often was a peer or a non-partner. Thus, the pattern of violence exposure and perpetrators differs between genders, which may have important implications for violence prevention strategies (study III).

Multiple exposure to sexual, physical or psychological violence during childhood and adolescence is the most potent risk factor for sexual victimization in adulthood among women. This supports the need to identify children and adolescents at risk early (study IV).

Violence against girls and women is a crime against human rights and a major global public health issue. Sweden is a leading country in respect to policies, legislation, and social and health-care programs for the care of survivors of all types of violence. However, the overall results of the studies, suggest that experiences of different types of violence in childhood, adolescence and adulthood are common among girls and women in Sweden. Around 680 000 girls under 18 years of age went to school in Sweden 2019.[101] The fact that approximately 110 000 of them could have been or are going to be subjected to severe sexual violence is disturbing. Children and adolescents are an important group

to target for violence prevention, both to reduce the lifelong health effects it may have, but also to decrease the risk of future violence.

In order for governments to plan and implement efforts to uphold fundamental human rights, knowledge is required. This thesis is a piece of the puzzle of our knowledge on violence, and the prevalence numbers presented shows that we have made progress but that it is going to take extensive work, research and time to reach the goal of putting an end to violence.

Future perspectives

The topic of violence is complex, there are no unambiguous answers on how it can be prevented and developing and developed countries may benefit from different approaches to research. A number of prevalence studies have been conducted and we do have a clearer picture today over the number of girls and women subjected to violence. Prevalence studies are however important to perform with regular intervals, not only to measure the number of persons exposed to violence at a specific time, but also to have an opportunity to examine if implemented prevention and intervention programs have had an effect. Both longitudinal and repeated cross-sectional designs would be preferable. Considering the discrepancies in methodology and definitions, more research should be conducted to find more concordant methods for measurement of violence exposure.

Sweden has a great number of immigrant women who do not speak Swedish. By translating questionnaires into different languages, we would get more reliable data regarding violence exposure among women in Sweden.

Primary prevention of violence is of importance, and continued research should therefore focus on the risk and protective factors linked to different types of violence in childhood, adolescence and adulthood.

The health-care system in Sweden has made efforts to develop programs to help and support survivors of violence. It would be valuable to conduct qualitative studies among women who have received such help, to investigate whether they have benefited from these efforts.

Swedish summary – Sammanfattning på svenska

Våld mot kvinnor är ett allvarligt samhällsproblem som globalt drabbar miljoner flickor och kvinnor. Våldet kan få stora konsekvenser för den drabbade individens hälsa både på kort och på lång sikt i form av psykiska och fysiska skador samt risk för återupprepning av våldet senare i livet. Att upptäcka och identifiera våldsutsatta flickor och kvinnor är därför av stor vikt, och hälso- och sjukvårdens personal har en nyckelroll i detta arbete.

Delarbete I

Syftet med studien var att undersöka erfarenheter av partnerrelaterat våld hos kvinnor som sökte familjeplaneringsmottagningen, Akademiska sjukhuset, för legal abort jämfört med kvinnor som sökte för preventivmedelsrådgivning på samma mottagning. Mellan oktober 2005 och oktober 2006 svarade 1 226 kvinnor från 15 år och uppåt på en självadministrerad enkät samt intervjuades av personal om erfarenheter av psykiskt, fysiskt och sexuellt våld utfört av partner eller före detta partner. 635 av deltagarna sökte mottagningen för abort och 591 sökte för preventivmedelsrådgivning, Vidare undersöktes huruvida kvinnor som någonsin genomgått abort (även bland de som sökte för preventivmedelsrådgivning) var utsatta för partnerrelaterat våld jämfört med de kvinnor som aldrig genomgått abort. Slutligen analyserades om kvinnor som gjort upprepade aborter i större utsträckning angav erfarenheter av partnerrelaterat våld.

Av de kvinnor som sökte abort hade 29 % erfarenhet av partnerrelaterat våld jämfört med 22 % av de kvinnor som sökte för preventivmedelsrådgivning. Kvinnor som någon gång genomgått abort hade i högre uträckning erfarenheter av partnerrelaterat våld jämfört med kvinnor som aldrig genomgått abort. Av de kvinnor som genomgått upprepade aborter hade 51 % erfarenheter av partnerrelaterat våld.

Delarbete II

Studien var en subanalys av materialet från delarbete 1 med syfte att undersöka erfarenheter av sexuellt våld hos kvinnor som sökte familjeplaneringsmottagningen, Akademiska sjukhuset. Analyser av erfarenheter av sexuellt våld, i vilken ålder detta skett och vem som var förövare genomfördes på de

1 226 kvinnor som deltog i undersökningen. Därutöver undersöktes om de kvinnor som hade erfarenheter av sexuellt våld också upplevt andra typer av våld.

27 % av deltagarna hade erfarenheter av sexuellt våld, majoriteten av dem när de var yngre än 18 år och i de flesta fall var förövaren någon som flickan/kvinnan inte hade en relation med. En stor andel av de kvinnor som utsatts för sexuellt våld av någon de inte hade en relation med hade erfarenheter av psykiskt eller fysiskt våld från en partner eller fd partner.

Delarbete III

Studien var en del i ett forskningsprojekt utvecklat vid Nationellt centrum för kvinnofrid och institutionen för socialt arbete vid Umeå universitet. Syftet med studien var att undersöka livsprevalensen av psykiskt, fysiskt och sexuellt våld hos ett representativt urval av kvinnor och män i Sverige, att analysera om det fanns skillnader mellan vilken typ av våld kvinnor och män utsatts för samt vem som var förövare.

Under våren 2012 sändes en webb- och postenkät med frågor rörande erfarenheter av psykiskt, fysiskt och sexuellt våld ur ett livsperspektiv, bakgrundsfrågor samt uppgifter om fysiskt och psykisk hälsa till ett riksrepresentativt urval av 10 000 kvinnor och 10 000 män mellan 18-74 år. Totalt deltog 56.8% av kvinnorna och 46,5% av männen i undersökningen. Statistiska centralbyrån, SCB, anlitades för att genomföra datainsamlingen. Vidare insamlades uppgifter om deltagarnas erfarenheter av öppen och sluten somatisk och psykiatrisk vård de senaste 5 åren från Socialstyrelsens Patientregister, PAR, samt deras nyttjande av aktivitets- och försörjningsstöd, sjukpenning, socialbidrag etc. från SCB:s register LISA, longitudinella integrationsdatabas.

Resultatet visade att kvinnor i större utsträckning än män hade utsatts för sexuellt våld både som barn och vuxna. När det gällde de fysiska och psykiska våldet var både kvinnor och män utsatta i hög grad med den skillnaden att män ofta utsatts som barn/ungdom av en jämnårig och kvinnor utsatts i högre grad av en partner eller fd partner.

Delarbete IV

Studien var en del i ett forskningsprojekt utvecklat vid Nationellt centrum för kvinnofrid och institutionen för socialt arbete vid Umeå universitet som beskrivs i delarbete III. Syftet med studien var att undersöka prevalensen av utsatthet för psykiskt, fysiskt och sexuellt våld i barndomen, utsatthet för sexuellt våld i vuxen ålder samt hur utsatthet för våld i barndomen och sociodemografiska faktorer kan associera till risken för sexuellt våld i vuxen ålder.

För analyser av studien användes den kvinnliga populationen av forskningsprojektet. Förutom frågor om fysiskt, psykiskt och sexuellt våld och bakgrundsfaktorer analyserades även registerdata från LISA.

16.3% av kvinnorna angav erfarenheter av sexuellt våld i barndomen och 10,3% uppgav erfarenheter av sexuellt våld i vuxen ålder. Det var vanligt att

kvinnor som utsatts för kombinationer av fysiskt och sexuellt, psykiskt och sexuellt eller fysiskt, psykiskt och sexuellt våld i barndom även utsatts för sexuellt våld i vuxen ålder. Erfarenheter av sexuellt våld i vuxen ålder var vanligare bland kvinnor som var ensamstående, hade högre utbildning, var arbetslösa eller hade haft socialbidrag.

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