Anna ChuChu Schindele

Vulnerabilities and Resources

Exploring intersecting conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden
Sexual and reproductive health and rights (SRHR) are a core determinant of health and constitute an important part of the transition from childhood to adulthood. In line with this, the national SRHR policy in Sweden strives towards health equity.

The overall aim of this thesis is to explore the conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden aged 16 to 29 by analysing the processes by which intersecting social determinants create vulnerabilities or resources in relation to SRHR. This explored in four papers that cover six SRHR-related health outcomes. The three health outcome areas of unsafe sex, sex against one’s will, and transactional sex are viewed as vulnerabilities. The health outcome areas of safer sex, sexual health literacy and sex-life satisfaction are viewed as resources.

The empirical material employed in the papers is drawn from the stratified and randomised national population-based survey ‘Sexuality and health among young people in Sweden’ also referred to as ‘UngKAB15’.

This thesis contributes new knowledge in the form of an in-depth understanding of how intersectionality constitutes a useful tool for exploring conditions for health equity in SRHR among young people. The intersectional analysis helps to illuminate groups that have a more or less vulnerable or resourceful position in relation to each of the six health outcomes explored. Moreover, the thesis contributes knowledge on intersecting conditions for health equity that can help to reach the global goal of Agenda 2030 “leaving no one behind”.

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Exploring intersecting conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden
Vulnerabilities and Resources

Exploring intersecting conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden

Thesis for Doctoral Degree (Ph.D.)
By Anna ChuChu Schindele

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Exploring intersecting conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden

Malmö university, 2024
Faculty of Health and Society
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PREFACE

This thesis has its origins in a brief but pivotal period when I worked as a counsellor at one of Sweden’s Youth Health Clinics. In my work I followed young people who were taking their first steps along the transition to adulthood. As they entered into the onset of sexual activity, many health issues in the field of sexual and reproductive health and rights (SRHR) were raised and needed to be both discussed and dealt with.

The counselling sessions often included conversations about the meaning of life and discussions about how a close relationship should and could be to be positive. Other common topics included: attraction, sexual identity, gender identity, sexual satisfaction, sex against one’s will, sexually transmitted infections (STIs), HIV, unintended pregnancies and parents who did not understand or who vetoed their choice of partners. My observation was that the young people I met were very enlightened when they analysed their social world - the world in which they had to make various decisions about SRHR. In this context, our counselling sessions focused very much on attempting to identify the reality of their vulnerabilities and the resources that they felt they had at hand.

Some years later I started work as an analyst at the Public Health Agency of Sweden. Here I was given the task of developing the first in-house, population-based survey on SRHR and HIV prevention among young people. Throughout the implementation of the results in various counties, municipalities, and civil society organisations, I felt that discussions were driven by a common desire to understand more about vulnerabilities and resources. Altogether, this is the background to my interest in deepening my knowledge about the conditions for health equity in SRHR among young people in Sweden.

January 2024,
Malmö
ORIGINAL PAPERS

This thesis is based on the following original scientific papers, which will be referred to by their roman numerals throughout the thesis:


BACKGROUND: Sexual and reproductive health and rights (SRHR) are a core determinant of health and constitute an important part of the transition from childhood to adulthood. The national SRHR-policy in Sweden strives towards health equity. In Sweden today, sexually transmitted infections (STIs) are common, which indicates a need for an increase in the practice of safer sex. Some groups are more vulnerable and more often experience unsafe sex, sex against their will and transactional sex. Further, in all these health outcome areas previous knowledge shows that young LGBTQI+ people, foreign-born youth and young people with insufficient economic resources display poorer sexual health. However, little is known about the conditions for health equity in the intersections within and between these social groups. Little is also known about whether and how resources for health equity are distributed from an intersectional perspective.

AIM: The overall aim of this thesis is to explore the conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden aged 16 to 29 by analysing the processes by which intersecting social determinants create vulnerabilities or resources in relation to SRHR. This overall aim is explored in four papers that cover six SRHR-related health outcomes. The three health outcome areas of unsafe sex, sex against one’s will, and transactional sex are viewed as vulnerabilities. The health outcome areas of safer sex, sexual health literacy and sex-life satisfaction are viewed as resources.

METHODS: The empirical material employed in the studies presented in this thesis is drawn from the stratified and randomised national population-based survey ‘Sexuality and health among young people in Sweden’ also referred to as ‘UngKAB15’. A random sample of 29,950 young persons was drawn from the Total Population Register. A total of 7,755 respondents answered the survey,
which gave a response rate of 26 percent. Descriptive (percentages) and analytical (regression models) statistical methods have been applied.

RESULTS: Paper I shows that there is a need for both national and global policy and population-based surveys to be accompanied by an intersectional understanding of vulnerable positions in relation to SRHR. Otherwise, vulnerable groups may be excluded from SRHR interventions and thus left behind. Mapping the results using a stepwise, descriptive intersecting vulnerability scheme provides a visual understanding and indicates how gender intersects with sexual identity, transgender experience, perceived economy, being foreign-born and social welfare recipiency to produce vulnerable positions. In total, the scheme presents a visual understanding of intersecting vulnerable positions in relation to SRHR.

Paper II shows an association between young people’s control over their life situation and their ability for safer sex. Control over one’s life can thus be defined as a resource for the ability to have safer sex. Gender alone cannot explain all the differences found in resources for safer sex, and an intersectional approach shows that gender and sexual identity are important determinants that can illuminate more or less resourceful positions.

Paper III shows an association between on the one hand perceived insufficient knowledge from school-based sexuality education in five explored knowledge areas: the body, STIs, sexuality, relationships and gender equality, norms and LGBT-perspectives, and on the other hand higher odds of not being able to care for one’s sexual health. The highest excess risk of having insufficient knowledge and less resources was associated with belonging to a sexual minority.

Paper IV show a univariate association between being satisfied with one's current sex life and good health, and this association remained and became slightly stronger in an adjusted model, indicating that young people may use sex-life satisfaction as a potential resource for good health. However, this resource is unequally distributed, since boys and non-binary youth are less satisfied with their current sex life than girls.

CONCLUSION: This thesis contributes new knowledge in the form of an in-depth understanding of how intersectionality constitutes a useful tool for exploring the conditions for health equity in SRHR among young people aged 16-29. The intersectional analysis helps to illuminate groups that have a more or less vulnerable or resourceful position in relation to each of the six health outcomes explored. The use of intersectional analysis has facilitated the identification of a range of complex patterns in the fields of vulnerability and
resources and can thus produce improved knowledge on conditions for health equity in sexual and reproductive health (SRHR) among young people in Sweden.

**CONCLUSION AND IMPLICATIONS:** When intersectionality is employed as an analytical tool, a complex pattern of vulnerabilities and resources in SRHR-related health outcomes is revealed. This can be visualized using a descriptive intersecting vulnerability scheme. The intersectional perspective illuminates that gender is a determinant that needs to be analysed together with other social determinants in order to understand complexities in vulnerabilities and resources for health, since both vulnerabilities and resources are affected by the intersection between gender and sexual identity, transgender experience, economic resources, social welfare recipiency and being foreign-born. Overall, the findings indicate that global and national policy on gender equality in SRHR needs to be updated with both knowledge and tools that include intersectionality.

**FUTURE RESEARCH:** Future research with a focus on intersectionality is needed to develop methods for handling small survey groups. Future studies can supplement categorizations based on the binary gender norm of women and men, girls and boys, and thus illuminate the wider diversity that exists in a population. More knowledge on diverse populations and the conditions for health equity can help to reach the global goal of Agenda 2030 “leaving no one behind”.
SVENSK SAMMANFATTNING


SYFTE: Det övergripande syftet med denna avhandling är att utforska förutsättningarna för jämlik hälsa inom området sexuell och reproduktiv hälsa och rättigheter (SRHR) bland unga i åldern 16-29 år i Sverige. Mer specifikt analyseras intersektioner av sociala bestämningssfaktorer som skapar sårbarheter eller resurser i relation till SRHR. Detta övergripande syfte utforskas i fyra artiklar som berör sex olika SRHR-relaterade områden. Oskyddat sex, sex mot sin vilja och sex mot ersättning analyseras genom begreppet sårbarhet. Säkrare sex, sexuell hälsolitteracitet och nöjdhet med sexlivet analyseras genom begreppet resurser.

METOD: Det empiriska materialet är hämtat från den stratifierade och randomiserade nationella befolkningssundersöknings ”Sexualitet och hälsa bland unga i Sverige” även kallad ”UngKAB15”. Undersökningsbygger på ett
RESULTAT: I artikel I presenteras ett deskriptivt intersektionellt schema som ger en visuell förståelse för hur en intersektionell analys kan identifiera utsatta positioner i relation till SRHR. Schemat visar exempelvis att intersektionen av sexuell identitet och kön spelar roll för vem som är sårbar för sex mot sin vilja. Resultaten visar att det finns ett behov av att både nationella och globala befolkningsbaserade undersökningar åtföljs av en intersektionell analys för att identifiera sårbara grupper i behov av SRHR-insatser.


Artikel III visar ett samband mellan otillräcklig kunskap från skolbaserad undervisning i sexualitet, samtycke och relationer inom fem utforskade kunskapsområden (kroppen, sexuellt överförda infektioner, sexualitet, relationer och jämställdhet samt normer och hbt-perspektiv), och högre odds för att inte kunna ta hand om sin sexuella hälsa. Gruppen med högst överrisk för otillräcklig kunskap, och därmed sämre tillgång till hälsofrämjande resurser, återfinns bland unga HBTQI+-personer.


SLUTSATS: Avhandlingen bidrar med fördjupad kunskap om hur intersektionalitet utgör ett användbart verktyg för att utforska förutsättningar till jämlik hälsa inom SRHR-området bland unga i åldern 16-29 år. Den intersektionella analysen har bidragit till att belysa ”grupper inom grupperna” och synliggöra mer eller mindre sårbara eller resursstarka positioner inom de hälsoutfallsområden som har utforskats. Användningen av intersektionell analys har underlättat identifieringen av en rad komplexa mönster och tydliggjort sårbarheter och resurser inom SRHR-området bland unga i Sverige.
This thesis deals with vulnerabilities and resources and explores intersecting conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden. This introductory chapter begins with a historical look back at the fields of sexuality and reproduction in order to understand their importance and position in today’s society.

The chapter then continues with an overview of the evolution of sexual and reproductive health and rights (SRHR) and positions the thesis within the research field of public health. It outlines a brief historical perspective on sexuality and reproduction and discusses the definition of SRHR currently employed in both global and Swedish policy.

Further, it provides an understanding of how young people are defined in the thesis and how and why SRHR concerns them in their transition to adulthood. Finally, a short, introductory overview is provided of SRHR-related health outcomes among young people, within both the global and the Swedish context. The introduction provides an overview of the area that will be studied in more detail in the dissertation’s sub-studies.

**Sexuality, reproduction and their mutual and interlinked history**

The academic introduction through biology

Carl Linnaeus was the first researcher to address human sexuality within the field of biology. In the book *Systema Naturae* he classified the biological species that he identified in a “system of sexuality” which described the conditions for biological reproduction (Linnaeus, 1758). Linnaeus further explored this in the lectures he gave on sexuality to the students at Uppsala University, where he
claimed that the body was filled with sexual fluids such as semen or menstrual blood. Moreover, Linnaeus stated that people practice sexuality in order to feel healthy (Linné, 2007).

In the early 20th century, Alfred Kinsey drew on Linnaeus’s work and explored the biological functions of sexuality in men and women. One of the primary findings in Kinsey’s reports was that 11 percent of men and 7 percent of women reported themselves to be equally heterosexual and homosexual. This showed that human sexuality is not explicitly heterosexual but should rather be viewed as a continuum of sexual attraction and sexual behaviour (Kinsey et al., 1948; Kinsey et al., 1953). The Kinsey reports were heavily criticised, with most of this criticism being due to sampling bias. However, when the reports were revised in 1963 to take account of this selection bias, the results did not appear to differ significantly from the original findings (Gebhard & Johnson, 1979).

The start of knowledge production in humanities and social science

In 1960, the biological aspects of knowledge production were questioned by the philosopher Michel Foucault, who claimed that there is no such thing as normal sexuality, but rather that all human sexual behaviours are the result of power dimensions and vary across different contexts (Foucault, 2012, 2019). A few years later, the sociologists John Gagnon and William Simon explored the ontology of sexuality in their “sexual scripts theory” (Gagnon & Simon 1973). This theory illuminates the way sexuality is learned through social interactions between people. Thus, sexual scripts become a kind of manuscript for how one can be sexual in a given society, and where the boundaries are located for what is acceptable and what is not (Gagnon & Simon, 2005). The authors further suggested that sexual scripts are closely intertwined with our understanding of gender. Sexual scripts enable us to understand where, how and with whom we can be sexual in a given society (Helmius, 2000; Masters et al., 2013; Timmermans & Van den Bulck, 2018; Wiederman, 2005).

The theory of sexual scripts has been criticised for underpinning the heterosexual understanding of sexuality (Pham, 2016). However, it has opened up the study of the social meaning of sexuality. Drawing on sexual script theory, the cultural anthropologist Gayle Rubin developed a theory on the distinction between sex and gender and their relationship to sexuality. This shed new light on the social construction of human sexuality and the concept of gender emerged as a complement to sex (Rubin, 1975). In the beginning of the 1990s, the philosopher Judith Butler added queer theory and in doing so questioned the binary categories of woman and man in relation to the field of sexuality. Butler contributed by
illuminating the power structures linked to heterosexuality and its associated norms using the concept of heteronormativity (Butler, 1990). In the mid-1990s, the gender scientist and queer philosopher Jack Halberstam (formerly Judith Halberstam) described the queer body as something that lies beyond normative ideas about what bodies denoted using the binary categories of men and women should be. Through Halberstam’s research, knowledge emerged about people with trans and non-binary gender experiences (Halberstam & Livingston, 1995).

**Historically and socially interlinked areas**

The demographer Nikolai Botev (2020) explored the nexus between sexuality and reproduction from the standpoint of historical perspectives on demographics and sociology. According to Botev’s findings, the vast majority of human beings relate to the two areas both socially and biologically. Although new reproductive techniques have emerged that decouple reproduction from sexuality, the areas remain closely interlinked in terms of social constructions and social control (Botev, 2020). Throughout history, sexuality has been seen as a proxy for reproduction, and to some extent this remains the case today. The two areas are interlinked and mutually dependent. For this reason, it has sometimes been difficult to separate and distinguish reproduction from sexuality, since human reproduction through sexuality has been a core component in life. However, over the years there has been a decoupling of sexuality and reproduction that has had extensive implications for social life (Botev, 2020). Better life conditions have decreased the need to produce large numbers of children, and knowledge on contraceptives accelerated the decoupling process between these two areas (Blurton Jones, 1987).

Sexuality, and thus also reproduction, has throughout history determined kinship and the inheritance of land, goods, money and other forms of property, and it has therefore been of political and cultural interest to control it. As a result, the field of SRHR emerged from the UN organisation the United Nations Population Fund (UNFPA) and not from the health sector (Botev, 2020; Foucault, 2019; UNFPA, 1994). Through the UNFPA’s global International Conferences on Population and Development (ICPD), reproduction and its links to sexuality have historically been addressed with the underlying objective of controlling population growth (UN, 1995). However, as contraceptives have led to revolutionary developments in both enabling and empowering women to control their reproduction, sexuality has been incorporated as a separate area that is interlinked with reproduction. The latest UN statement from the ICPD Nairobi Summit states the need to accelerate progress in reaching SRHR for all by
achieving progress in both sexuality and reproduction, stated as separate but interlinked parts, on the basis of a human rights approach (UN, 2019). As will be explained in more detail in the section “Who is young?”, the majority of young people in Sweden reproduce relatively late in comparison to other countries. As a result, for most of them, reproduction is mostly a question of having, and using, the right contraceptive method while they explore their sexuality. The emphasis in this thesis is therefore focused on the area of sexuality, although this is closely linked with reproduction.

**Health enters the field of sexuality and reproduction**

Against the background of the decoupling of sexuality and reproduction, and of economic development, the two areas have increasingly been incorporated into the field of health science and public health under the umbrella term SRHR. In the field of public health, sexuality and reproduction have continued their transformation from an area to be controlled into an area in which the focus is directed at conditions for health equity (Johnson, 2005; Starrs et al., 2018; WHO, 2016).

As a nation, Sweden has been a country in which the conditions for sexuality and reproduction have changed enormously over the past 200 years. Sweden has gone from being one of the countries with the highest rates of maternal mortality to one of those with the lowest rates. Sweden has also gone from a situation in which there was no possibility of exercising control over childbirth to one in which all possible modern technologies are used for the control and facilitation of reproduction (Botev, 2020; Landau, 1996; Lennerhed, 2020). From the 1960s onwards, Sweden has had national SRHR interventions such as youth clinics and free abortion, and has conducted population surveys within the area of SRHR (Edgardh, 2002; Lewin & Helmius, 1983; The Swedish Ministry of Education, 1969). Sweden was also the first country in the world to reach the treatment goals for people living with HIV, which has transformed HIV from a deadly and transmittable disease into a possible situation where a well-treated and virally suppressed HIV infection is not contagious (Gisslén et al., 2017; Herder, 2021). Many of these efforts have been made in the borderland between the humanities, social science and medicine but have from the 1980s been framed within the field of public health.

Today, SRHR forms part of target area 7 “control over life resources and inclusion in social life” in Swedish public health policy. The goal is for the population to have equal conditions for SRHR. Consequently, the focus of public health policy in SRHR involves a compensatory perspective that considers how vulnerable groups can increase their access to resources that can strengthen their
health. Thus, SRHR in a Swedish context is focused on health equity (Swedish Government, 2018). In the work towards achieving health equity, more tools are needed to illuminate how power structures, and people’s positions within these structures, influence the conditions for health and to this end it has been noted that intersectionality can serve as a useful tool (Bredström, 2008; Marcellin et al., 2013; Trygg Fagrell, 2022). Intersectionality – which is central to this thesis – is a theory and tool used to critically explore the various, complex and intersecting levels of inclusion and marginalisation created by society's power structures (Crenshaw, 1991; Trygg Fagrell, 2022). Power structures can be understood as norms and values associated with social determinants such as gender, sexual identity, transgender identity, insufficient economic resources and being foreign born. Common and discriminatory societal norms relating to these determinants include, for example, sexism, heterosexism, cisgenderism, classism, migrantism and racism (Alvidrez et al., 2021; Butler, 1990; Lennon & Mistler, 2014; Tudor, 2017). This will be described further in the theoretical framework chapter. Despite the importance of social determinants for health, there is lack of quantitative population studies that have been analysed from an intersectional perspective in Sweden.

**Today's global and national policy goals**

In 2018, the global research committee of *The Guttmacher-Lancet Commission on SRHR* formed a global working group to outline a knowledge-based definition of SRHR in the field of public health (Starrs et al., 2018). Based on the knowledge identified and presented in commission’s report, Sweden formed its first national SRHR policy in 2020. The policy states that sexual and reproductive health is a fundamental part of health and well-being throughout human life, both physically, mentally and socially. The Swedish SRHR-policy underlines that the interplay between structural, biological and individual factors determines the conditions for sexual and reproductive health, and that in order to achieve health equity, it is necessary that people are given equitable conditions (The Public Health Agency of Sweden, 2020).

Thus, achieving sexual and reproductive health requires the recognition of sexual and reproductive rights, which are based on human rights for all (Hussein et al., 2018; Miller et al., 2015; Sladden et al., 2021; WHO, 2015). These include the rights to respect for one’s physical integrity, private life and personal self-determination, to freely define one’s own sexuality, including sexual orientation, gender identity, and expression, to determine if and when one wants to be
sexually active, to choose one’s sexual partner(s), to have safe and enjoyable sexual experiences, to decide when and with whom a possible marriage should be concluded, to determine if, when and how one wants to have children, and how many, and to have access to information, resources, services and the support needed to achieve the above throughout life, without the risk of discrimination, coercion, exploitation or violence (Starrs et al., 2018).

The SRHR definition outlined by the Guttmacher-Lancet Commission has mainly met with positive reactions in the fields of research, policy and practice, not least as a result of its knowledge-based approach and the way it defines a wide range of issues as determinants of SRHR and general health. One reason for this is that the commission acknowledges that sexual rights constitute a foundation for sexual and reproductive health (IPPF, 2018; Sadinsky et al., 2018).

The rights-based approach can be understood and visualised in terms of three overlapping SRHR circles (Figure 1), comprising the three major components: sexual health, reproductive health and sexual and reproductive rights. The SRHR circles are mutually interlinked and form a foundation as determinants of health. The SRHR-circles illustrate how the three areas together co-construct health.

**Figure 1. The SRHR-circles**

![Diagram of SRHR-circles](image)

However, there are gaps in the work of the Guttmacher-Lancet Commission as a result of the exclusion of sensitive political issues such as transactional sex and sex work. This might lead to important health-determining behaviours and structures related to vulnerability and resources being missed. However, the outlining and negotiation of a common SRHR-definition may be seen as a basis for further developments. It may similarly serve as a platform for evaluations and
for measuring progress. Both the vision outlined by the Guttmacher-Lancet Commission and Sweden’s national SRHR-policy have a focus on striving to achieve health equity, i.e. they encourage nation states to explore and take measures if the conditions of social life are unfair or incompatible with human rights. Moreover, if social inequalities are found, action should be taken to remedy them (McGovern, 2020; Starrs et al., 2018; The Public Health Agency of Sweden, 2020). This thesis seeks to explore six SRHR-related health outcomes in a Swedish context. The following five health outcomes are included in both the Guttmacher Lancet definition and the Swedish policy: unsafe sex, sex against one’s will, safer sex, school-based sexuality education and sex-life satisfaction. The thesis also adds transactional sex, which is of interest in the Swedish context with regard to policy on HIV prevention and gender equality (Swedish Government, 2016; UNAIDS, 2018, 2021).

Who is young?

A time of transition

The period of life between 16 and 29 years of age, is a time when Swedish people are regarded as being young. This period is long compared to other countries viewed from both a historical and global perspective (Frisén & Wängqvist, 2010; OECD, 2021). The period of being young, but not yet an adult, has also been extended in Sweden since the average age for becoming a parent for the first time is 30 years for women and 32 for men (Statistics Sweden, 2021a). Even though the conditions of social life and the conditions for health among young people in Sweden are heterogeneous (Swedish Government, 2018), young people nonetheless share the experience of passing through a number of sexuality-related transitions from childhood to adulthood (Unis, 2020).

These transitions also include, for example, graduating from elementary or upper secondary school, starting to look for a job, or studying at university. This period of life can also be a time during which a young person drops out of school and ends up in social exclusion, with no work or education (Statistics Sweden, 2021b; WHO, 2018b). However, in Sweden all these transitions constitute a starting point for individual steps on the path to adulthood. In terms of SRHR, and in the Swedish context, this may for many young people be the starting point

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1 In this thesis school-based sexuality education is seen as a possible resource for sexual health literacy

2 No statistics are available on parenthood among people of non-binary gender.
for a serially monogamous lifestyle, in which young people tend to change partner from time to time (Forsberg, 2005; Lewin & Helmius, 1983; Tyden et al., 2012). This is similar to the lifestyle of young people in other Scandinavian countries such as Norway and Denmark (Hansen et al., 2020). In the context of these transitions, questions relating to SRHR are present in life choices and existential questions that characterise the lives of young people (Unis, 2020).

**Defining young people is contextual**

In a global context, the WHO defines adolescence as the period of development between childhood and adulthood, spanning the ages 10 to 19. In addition, the organization classifies young people as including those in the age range 10 to 24 (WHO, 2018a). The term “emerging adulthood” is not linked to a proposed age definition in the scientific literature. Instead the term defines the period during which a person leaves the dependency associated with childhood and becomes a young person, but has not yet assumed the responsibilities associated with adulthood (Arnett, 2000; Unis, 2020).

In the Swedish context, being young may also include those covered by the term “ung vuxen” ("young adult"), which in the current context may be defined as encompassing those aged 25-29 (Swedish Government, 2005). There are a variety of ways in which any definition may be delimited for analytical purposes. As has already been noted, in the Swedish context the time span associated with being young is longer than in many other countries, and as a consequence SRHR and HIV prevention work in Sweden includes children aged 0-12, teenagers aged 13-19, and young adults aged 20-29 (Swedish Government, 2005). In the empirical material employed in this thesis the term young people refers to those aged 16-29.

During the extended period of emerging adulthood, young people experience social life in the context of relations with their peers and obtain guidance from connecting with others in social groups who share similar interests and life experiences (Hammarén & Johansson, 2009; MUCF, 2021). Belonging to a social group is a way of achieving both self-understanding and an understanding of how to look at others and the surrounding world (Marmot, 2004; Young, 2011). Such groups can vary over time. In Sweden, young people with LGTBQI+ identities, and social class, racial and/or migration experiences have been identified as groups that share a common experience of being affected by power structures resulting in poorer health (Baroudi et al., 2021; Hiltunen, 2017; MUCF, 2010, 2015, 2021). Yet, little is known how these social groups intersect.
Moreover, in the context of public health, social groups are sometimes referred to as social determinants, meaning that a group, relative to others, experiences specific conditions that determine health outcomes (Marmot, 2005). Examples of the social groups that are associated with SRHR outcomes and HIV prevention are those based on: sexual identity, transgender experience, insufficient economic resources, social welfare recipiency and being foreign-born (Baroudi et al., 2021; Causevic, 2023; Johansson, 2018; Schindele & Lindroth, 2021). This will be discussed in more detail in the section “Health status in the Swedish context”.

**SRHR-related health status**

**Global context**

The Guttmacher–Lancet Commission’s report on SRHR not only outlined the SRHR concept but more specifically positioned the area within the field of public health (Starrs et al., 2018). The commission’s report demonstrates that it is critical to promote and safeguard SRHR in order for young people to contribute to their overall health development within various communities and societies (Ghebreyesus & Kanem, 2018). The Guttmacher–Lancet Commission also states that realising the vision of the intention in their report will help to reach the inclusive vision of Agenda 2023 that urges all countries to “leave no one behind”, and to “improve the lives and prospects of everyone, everywhere” (UN, 2015).

According to the commission’s findings, the lack of respect for SRHR leads to almost 4 billion people of reproductive age globally having insufficient reproductive health services during their reproductive years (Starrs et al., 2018). These include more than 200 million women in poor countries, in all age groups, who want to avoid pregnancy but are unable to do so due to a lack of access to modern contraception. Moreover, 25 million unsafe abortions occur each year around the world, and 350 million people, of all ages, require treatment for sexually transmitted infections (STIs) and nearly one out of three women experience sexual violence at some point in their lives (Starrs et al., 2018). Additionally, in 2022 almost 1.3 million individuals were infected with HIV and 9.2 million people living with HIV did not have access to antiretroviral treatment (UNAIDS, 2023a). Young people constitute those who suffer most from unplanned pregnancies, unsafe abortions, HIV and STIs, since their right to health in relation to these issues may influence both their current and future health (Chandra-Mouli et al., 2020; Liang et al., 2019). For this reason, population-based surveys among young people that provide opportunities to use
disaggregated data are needed. Disaggregating data involves breaking down an empirical quantitative material into detailed sub-categories, for example by gender, income or migration status, and such data constitute a crucial tool to facilitate learning about health today and to strive for further progress (UN, 2019).

From the late 20th century to the present, a number of policies and action plans have been introduced in the field of young people and SRHR (UN, 1995; UNAIDS, 2001; UNFPA, 1994; WHO, 2016). This has resulted in global progress in the form of a reduction in child marriage and an increase in sexual and reproductive services and HIV care and treatment (Liang et al., 2019). However, there are still large gaps that need to be filled in order to achieve global, national and regional goals. One gap that has been identified relates to the persistence of social taboos around young people’s sexuality. This in turn has an impact on the availability of survey data and the dependability of such data, due to the possible underreporting of (or an absence of data on) behaviours that are less socially acceptable, such as sexual relations before marriage, same-sex relations, transgender identity and abortion. It is difficult to quantify the extent of this underreporting (Chandra-Mouli et al., 2019; Liang et al., 2019; UNESCO, 2018). To conclude, there is a need for national surveys to include the full range of aspects of SRHR in questionnaires, and to allow for the disaggregation of data on the basis of, for example, gender, income, migration status and sexual identity (UN, 2019).

Swedish context

As regards a brief overview of SRHR status among young people in Sweden, the following may be noted. The average age at sexual debut has been constant for the past 50 years at around 16–17 years. The number of sexual partners has increased over time in the population as a whole, and the relative increase has been greatest among women, with the number of sexual partners now having become relatively equal between the sexes (Edgardh, 2002; Lewin, 1998; The Public Health Agency of Sweden, 2017; The Swedish Ministry of Education, 1969; Tikkanen et al., 2011). Based on Sweden’s SRHR work, which until 2020 was framed within the national HIV strategy, a brief overview of core SRHR-outcomes will now be presented in more detail.

Sexual identity and sexual behaviour

Data from the population-based survey UngKAB15 showed that 14 percent of young people in Sweden define themselves as belonging to a sexual minority
(“homosexual”, “bisexual”, “I usually don’t categorise my sexual identity” or “other”), while 83 percent define themselves as being heterosexual and 3 percent describe themselves as “don’t knows” (The Public Health Agency of Sweden, 2017). Among non-binary, 86 percent identify as bisexual. More boys (87 percent) than girls (80 percent) identify as heterosexual. However, more boys than girls had a same-sex experience at last intercourse. This shows a diversity in terms of gender, sexual identity and sexual behaviour among young people in Sweden (The Public Health Agency of Sweden, 2017).

**Unsafe sex**

Unsafe sex is a term used to describe situations in which no protection is used against sexually transmitted infections or unwanted pregnancies during sex (Ekstrand, 2008). The use of condoms among young people in Sweden peaked in the 1990s in the wake of the global HIV/AIDS epidemic, which was at the time a fatal disease (Edgardh, 2002). Over recent decades, the nature of the HIV/AIDS epidemic has changed, and those living with HIV today have access to effective treatment, have good physical health and are free of any detectable viral load (Gisslén et al., 2017; Herder, 2021; The Public Health Agency of Sweden & The Reference Group for Antiviral Therapy, 2019). This may have had an impact on young people’s choice of contraceptive method and their approach to birth control and/or HIV/STI prevention.

After the mid-1990s, young people in Sweden became more worried about unwanted pregnancies than about HIV/STIs (FHI, 2000). As a result, condom use among young people has declined over time and hormonal contraceptives have been more widespread than condom use (Forsberg, 2005). Over time, boys have reported engaging in unprotected sex more than girls (The Public Health Agency of Sweden, 2017; Tikkanen et al., 2011). In a web-based survey conducted in the mid-2010s, 25 percent of boys reported that they would engage in sex without a condom, even if this meant exposure to the risk of contracting a sexually transmitted infection (The Public Health Agency of Sweden, 2015).

To ensure a knowledge-based approach, and to learn more about HIV prevention, national randomised and population-based surveys were introduced as part of national agencies’ implementation of the UNGASS3-declaration on HIV/AIDS (Swedish Government, 2017; UNAIDS, 2001). The surveys were introduced as Knowledge, Attitudes and Behaviour surveys (KAB-surveys), influenced by the social learning theory and the concept of self-efficacy

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3 United Nations General Assembly Special Session on HIV/AIDS (UNGASS)
developed by Albert Bandura (Bandura, 1977, 1989; Bandura & Walters, 1977). For a long time the general assumption regarding why young people engaged in unprotected sex was that they did so because they lacked a sufficient understanding of STIs and unintended pregnancies. The Chlamydia Action Plan, a nationwide initiative, was created to educate young people about risky sexual behaviour (The National Board of Health and Welfare, 2009). However, the results of the baseline study, “UngKAB09”, which constituted an integral part of the action plan, revealed that the majority of Swedish youth, and especially those with good socioeconomic living conditions, knew about safer sex, STIs and unintended pregnancies (Tikkanen et al., 2011). The survey also showed that young people in more vulnerable social groups were overrepresented among those with STIs (Hammarstrom et al., 2015). This led to changes in the view of the factors (i.e. determinants) that produce vulnerabilities or resources for safer sex, and the work became more focused on vulnerable groups or groups “at risk”. The baseline UngKAB09 study showed that knowledge alone cannot promote conditions for health equity and that attitudes derived from power structures might be more important. A discussion was started focusing on the need for a broader view on how social life produces conditions for health equity in SRHR. This change was one of the reasons behind the supplementation of the HIV strategy with a policy on SRHR.

**STIs and HIV**

Chlamydia is a consequence of unsafe sex and has for many years been the most common sexually transmitted infection (STI) among young people in Sweden (Boman, 2013; Ivarsson et al., 2022). Rates are higher today than they were 20 years ago, but have decreased over the last five years. In 2022, 32,808 cases of chlamydia infection were reported, corresponding to an incidence of 312 cases per 100,000 inhabitants, which is an increase in comparison to 2021. However, this might be an effect of the restrictions associated with Covid-19 in 2020 and not of a change in sexual behaviour. Chlamydia is most common in the age groups 15–19 and 20–24 for women and in the age group 20–24 for men (The Public Health Agency of Sweden, 2022a).

Gonorrhoea is also a consequence of unsafe sex, and due to its position as the sexually transmitted disease with the greatest threat to antibiotic resistance it is a major concern in the field of STI prevention (Yang & Yan, 2020). In 2022, 3,356 cases of gonorrhoea were reported, which constitutes an increase compared to 2021 (The Public Health Agency of Sweden, 2022b). In total, 77 percent of those infected were men but the incidence increased among both men and women in all
age groups. The largest increase was found among women aged 20–24 and among men aged 20–34. As in previous years, the most common transmission route was found among men who have sex with men (MSM). The proportion of isolates\(^4\) resistant to antibiotics has increased since 2020 and there is a risk of antibiotic resistance in relation to gonorrhoea infection. This situation makes it more important to reduce the spread of gonorrhoea than was previously the case (The Public Health Agency of Sweden, 2022b).

HIV can be a consequence of unsafe sex or other routes of transmission (The Public Health Agency of Sweden, 2022c). However, it is important to distinguish between those who live with HIV and have viral suppression and those who live with an unknown or untreated infection. A well-treated and virally suppressed HIV infection is not contagious, compared to an untreated HIV infection where transmission can occur via unsafe sex, from mother to child, or via unclean injection needles. Thus, the focus on HIV prevention in the wealthy part of the world has gone from viewing it as a sexually transmitted disease, that is primarily prevented through safer sex, to an infection that, through viral suppression and PreP\(^5\), can be turned into an infection that is not transmitted at all (Herder, 2021; The Public Health Agency of Sweden & The Reference Group for Antiviral Therapy, 2019). However, there remains a risk that someone who does not know their HIV status will transmit HIV to a partner, which continues to happen. Therefore, HIV continues to be an infection of major importance in the work with safer sex and the conditions for health equity (Swedish Government, 2017).

In 2022, a total of 446 new cases of HIV infection were reported, which constitutes an increase compared to 2020–2021 (The Public Health Agency of Sweden, 2022c). The increase in cases is primarily found among people who came to Sweden as a result of the war in Ukraine. However, the majority of these had a previously known HIV diagnosis with ongoing antiretroviral treatment upon arrival in Sweden. In 2022, most cases were reported in the age group 30–39 years, with the median age being 39 years (range 1–76). As in previous years, HIV infection was more common among men (59 percent) than women. Of the 54 cases that had acquired the infection in Sweden, 52 percent were transmitted through sexual contact with the opposite sex and 46 percent through sexual contact with the same sex, of which all belonged to the MSM group (The Public Health Agency of Sweden, 2022c). In Sweden today, HIV is quite uncommon

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\(^4\) The analysis of isolates is a way of monitoring antimicrobial resistance.

\(^5\) PreP is an HIV medication that an HIV-negative person can take to avoid contracting HIV.
among young people. In 2021, 554 young people aged 0-29 were living with HIV (InfCareHIV, 2022).

Abortion

Abortion is a consequence of unintended and unwanted pregnancy and is often linked to unsafe sex (Ekstrand, 2008; Niemeyer Hultstrand et al., 2023). Abortion is seen as a solution when contraceptive use has failed, and the provision of abortion in Sweden is based on rights-based legislation focused on women’s health regardless of age and marital status (Swedish Parliament, 1974). Approximately 35,450 abortions were carried out in Sweden in 2022. This corresponds to about 18 abortions per 1,000 women in the age range 15 to 44 years. Teenage abortions have declined over the past 10 years (The National Board of Health and Welfare, 2021). Among other things, this decline may be related to an increase in the prescription of long-acting contraceptives for this age group (Kopp Kallner et al., 2015).

Sex against one’s will

Sex against one’s will refers to sexual acts without consent (The Public Health Agency of Sweden, 2017). All sexual acts against a person’s will constitute an assault and may ultimately be punishable by law. However, the concept of sex against one’s will is broader and primarily aims to capture health perspectives rather than legal aspects. The Swedish population-based survey UngKAB09 was conducted in 2009 and allowed for the first quantification of the prevalence of experiencing sex against one’s will. Forty percent of young people in Sweden at the time had first-hand experience of having sex against their will. Some professionals believed this proportion to be extremely high, and the study’s validity was called into question in the Swedish Medical Journal (Herlitz, 2011). However, the same proportion (40 percent) was found in the subsequent survey, UngKAB15. Moreover, the figures were 54 percent for girls and 27 percent for boys. Among people who did not want to categorize themselves based on gender, the proportion was 53 percent (The Public Health Agency of Sweden, 2017). Little is known about experiences of sex against one’s will among young people with different sexual identities in relation to a population-based sample.

Transactional sex

Transactional sex is an area that covers both commercial and non-commercial exchanges of goods, protection or money related to sexuality. In the context of transactional sex, the involved parties may define themselves as lovers rather than
clients or sex workers (Standing, 1992). In comparison to the concept of sex work, which is highly stigmatised in most cultures, the concept of transactional sex is broader. In transactional sex, the exchange of goods, protection or money may be implicit and not formally negotiated. Transactional sex relationships range from a single encounter to long-term relationships (UNAIDS, 2018). About 3 percent of young people in the general population in Sweden have experience of transactional sex, which involves receiving goods or money for sex (The Public Health Agency of Sweden, 2017; Tikkanen et al., 2011). Transactional sex experiences are more common among young LGBTQI+ people and among young people in state-run care and young people with migration experience (Causevic, 2023; RFSL, 2011; Schindele & Lindroth, 2021).

**School-based sexuality education**

School-based sexuality education is curriculum-based education by teachers or other professional in schools. It should be knowledge based and include both fact-based and value-based topics (UNESCO, 2018). Sweden has had school-based sexuality education for over 60 years, and the topics covered and quality of the education have varied over time (Bengtsson & Bolander, 2020; The National Agency for Education, 2014; The Swedish Schools Inspectorate, 2018). In a review of 24 European countries' school-based sexuality education, only eight countries, including Sweden, reached the goal of comprehensive sexuality education (Beaumont & Maguire, 2013). Although Sweden has done a lot in this field for a long time, previous studies indicate that there are still parts that need to be developed in order to achieve equal conditions for health. The national survey UngKAB15 showed that only half of young people felt that they had gained sufficient knowledge to take care of their sexual health from school-based sexuality education. Prior studies on school-based sexuality education in Swedish schools have focused on exploring the topics that have served as its focal points, and on how instructors and students have reflected on their perceived knowledge (Bengtsson & Bolander, 2020; Bäckman, 2003; Lukkerz, 2023). Little is known about what young people with different sexual identities learn from school-based sexuality education.

**Sex-life satisfaction**

Depending on the perspective employed, sex-life satisfaction is both a determinant of health and a part of quality of life and well-being (Anderson, 2013; Andersson, 2019; Schönnesson et al., 2018). In the latest UngKAB survey, a majority of the respondents (56 per cent) reported that they were quite or very
satisfied with their present sex life. A higher proportion of girls (32 percent) than boys (26 percent) reported that they were very satisfied with their sex life (The Public Health Agency of Sweden, 2017). Although Sweden has long had a generally accepting view of young people’s sex lives, sex-life satisfaction has not been a focus for either policy or practice in the field of public health (Forsberg, 2005; Lewin & Helmius, 1983; The Public Health Agency of Sweden, 2017; The Swedish Ministry of Education, 1969). The first policy passage related to sex-life satisfaction can be found in the 2017 National HIV strategy, which characterised sexuality as a positive aspect of people’s lives (Swedish Government, 2017). Youth Health Clinics in Sweden are the setting in which young people’s sexuality has received the most support, and over the years, the organization for Swedish Youth Health Clinics has actively promoted youth health by highlighting the positive aspects of sexuality (FSUM, 2018). Moreover, the new SRHR policy from 2020 includes formulations about positive aspects such as sexual pleasure and acknowledging that sex-life satisfaction is a determinant of general health (The Public Health Agency of Sweden, 2020). However, little is known about whether sex-life satisfaction can be a resource for health among young people.

**Summary**

To provide a context for the research field, this introduction has presented a historical overview of the development of sexual and reproductive health and rights (SRHR) and placed SRHR in the context of conditions for health equity within public health. The chapter has described how the umbrella term SRHR is used today in both global and Swedish policy. Moreover, it has motivated the age span used in this thesis and also how and why SRHR is of importance for young people during the transition to becoming adults. Finally, it has presented a summary of core SRHR-related health outcomes from both a global and a national perspective. The brief overview of Swedish data on SRHR-related health outcomes shows that unsafe sex is common, STI rates are high and that there is a need to reduce unsafe sex, sex against one’s will and transactional sex. Furthermore, it shows that little is known about how perceived knowledge from school-based sexuality education and sex-life satisfaction can be seen as resources for health. Finally, the introduction illuminates that little is known about how SRHR-related health outcomes are related to conditions for health equity in the intersections within and between different social groups.
This chapter sets out the rationale, *the why*, for the thesis and gives an insight into the reasoning behind the aim. In combination with the introduction, the rationale provides the context for the thesis by introducing the analytical concepts and perspectives related to vulnerabilities and resources that are employed. Moreover, the chapter positions the thesis within the research subject of Health and Society. The chapter visualises how the sub-studies are framed and linked to one another.

**Why this thesis?**

The introduction showed that STIs are common among young people in Sweden and that there needs to be an increase in the practice of safer sex. Some groups are more vulnerable and more often experience unsafe sex, sex against their will and transactional sex. Further, in these health outcome areas, previous knowledge shows that young LGBTQI+ people, foreign-born youth and young people with insufficient economic resources display poorer health. However, little is known about the conditions for health equity in the intersections within and between these social groups. To achieve the compensatory goal of health equity, vulnerable groups need to access resources that can improve their health in the area of SRHR. Therefore, to provide more in-depth knowledge on the conditions for health equity, intersectionality may be a useful tool for exploring both vulnerability and resources.
Conceptual and contextual points of departure

Vulnerability and resources are concepts that will serve as a basis for the explorative approach employed in the thesis. Concepts are the cornerstones of theory, and as a result, analysing and presenting central concepts in the context of research serves as a means of being more precise about why and how theories and empirical material are used (Goertz & Mahoney, 2012).

Vulnerability and resources are mutually interlinked and central to learning about health. Vulnerability can be defined as the inability to overcome the impacts of a difficult or even hostile social environment (Pacquiao & Douglas, 2019), while resources can be seen as the ability to find and utilise social factors that create goods and value for the individual in order to produce health (Tengland, 2008; WHO, 1986). Both vulnerability and resources represent major analytical concepts in the field of public health (Pacquiao & Douglas, 2019; Tengland, 2010a, 2010b; WHO, 1986). They are sometimes used as equivalents to the concepts of risk and resilience (Panter-Brick, 2014), but by comparison with these other concepts, vulnerability and resources highlight the importance of structural dimensions and the impact of societal conditions on health equity (WHO, 1986).

The thesis has been produced within the research subject Health and Society, in which the objective is to study health and illness among individuals and groups in relation to societal conditions and structures. The research conducted within Health and Society strives to employ an interdisciplinary approach that encompasses medicine, health sciences, public health, social sciences and the humanities, with these disciplines being woven together in the exploration of the relationship between, for example, social, psychological, cultural, political, economic, legal and philosophical aspects on the one hand, and health and illness on the other (Faculty of Health and Society, 2023).

Conceptual framing

The conceptual framing of the thesis is based on the two concepts of vulnerability and resources, which operate as analytical tools in relation to the thesis’ aim, theory and empirical material. More precisely, these concepts serve to link each of the papers to the overall aim of the thesis. Consequently, the four papers explore vulnerability and resources in relation to six chosen SRHR-related health outcomes drawn from the empirical material. The three health outcome areas of
unsafe sex, sex against one’s will and transactional sex are viewed as vulnerabilities. The health outcome areas of safer sex, sexual health literacy and sex-life satisfaction are viewed as resources. As can be seen in Figure 2, vulnerabilities are explored in one paper, while resources are explored in three papers. This choice was made because vulnerabilities have historically been explored more than resources.

Figure 2. Framing of the thesis
AIM

The overall aim of this thesis is to explore the conditions for health equity in sexual and reproductive health and rights (SRHR) among young people in Sweden aged 16 to 29 by analysing the processes by which intersecting social determinants create vulnerabilities or resources in relation to SRHR.

This overall aim is addressed in four papers that cover six SRHR-related health outcomes:

- **Paper I.** Explores vulnerable positions in relation to: unsafe sex, sex against one’s will, and transactional sex.
- **Paper II.** Explores whether control over one’s life may be a resource that affects the ability to suggest safer sex.
- **Paper III.** Explores whether perceived knowledge gained from school-based sexuality education can be used as a resource for sexual health.
- **Paper IV.** Explores whether sex-life satisfaction is a potential resource for health.
This chapter presents the theoretical framework employed in the thesis. It begins by discussing health and then presents the theory of health promotion, which mostly concerns itself with resources for health. Next, the conditions for health equity are defined, and this is followed by a presentation of the social determinants that are primarily used to measure vulnerability to ill-health. The chapter concludes with a presentation of the theory of intersectionality, and discusses both vulnerabilities and resources in terms of marginalisation or inclusion.

**Health**

Health theory constitutes the philosophical and conceptual means of describing what constitutes health. Such a description makes it easier to argue for the fundamental standpoints taken to enhance and measure health (Brülde & Tengland, 2003). However, defining health is not as easy as defining disease. Health has no genera, species or diagnosis. The definition of health strives to encompass the sum of all aspects of human life. This way of viewing health is referred to as a holistic health approach (Nordenfelt, 2016). Defining disease is easier and takes place within the theory of medicine, where scientific actions are undertaken in order to convert illness into health (Boorse, 1977, 2014; Nordenfelt, 2016). The WHO supports the holistic health view and declares that health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (UN, 1946). Well-being involves quality of life and individuals’ perceptions of their health, and the concept relates to subjective emotions and understandings of everyday life. Thus, well-being is sometimes also called subjective health (Brülde & Tengland, 2003). There is an overlap between health and well-being. However, the two need to be analysed...
separately since while health can be hampered by disease, individuals may still perceive themselves as having good well-being (Kaplan et al., 1976; Phillips et al., 2023). This thesis has a focus on health, and more specifically on sexual and reproductive health and rights, within a public health framework. In public health research, influences from epidemiology are intertwined. In epidemiology, mapping the distribution of disease within a population is central. Epidemiology seeks to calculate the risk for susceptibility, risk or vulnerability to disease, or violations of health (Berkman et al., 2014; Bonita R et al., 2006). From an SRHR-perspective, health is viewed as holistic and as being closely related to well-being and quality of life (Starrs et al., 2018; The Public Health Agency of Sweden, 2020). A holistic understanding of health is used in this thesis.

**Health promotion**

Health promotion is a theory and tool in which health is viewed as the process of enabling people to increase control over their lives, and in doing so to improve their health. In this theory, health is seen as a resource for everyday life, in the context of which people live, work and love, and not as the objective of life (Nutbeam, 1998; WHO, 1986). The definition of health promotion was first launched at the WHO health conference in Ottawa in 1986 using a holistic view of the ways health is created in all sectors of society. One intention of the theory of health promotion is that of acknowledging that health is not the sole responsibility of the health sector. Health promotion is founded in the social conditions in which people live and focuses on how people may exercise control over their social lives in order to form, improve and maintain health (WHO, 1986). The creation of health through health promotion can be understood as being achieved via the individual’s ability to use societal resources to develop an ability to act in certain ways that promote health. As a result, health-promotion workers strive to change socio-political factors and often challenge power structures in society (Tengland, 2010a).

At the same time as the WHO outlined the policy of health promotion, the economist and philosopher Amartya Sen showed that an individual’s health, finances and social resources together produce an ability to act, a "capability". Sen described how health is a part of social development and can be seen as a resource for building a sustainable society characterised by peace and freedom (Sen, 1973, 1995; The Nobel Foundation, 1998). Based on Sen’s research, the philosopher Martha Nussbaum has further described capability theory with a focus on the individual’s freedom and health. Capability includes the concept of
ability which is the term used in health promotion. Nussbaum describes capability and ability as, among other things, bodily integrity with freedom from violence in general, and in particular from sexual violence (Nussbaum, 1999, 2011; Tengland, 2010a). Capabilities comprise all the internal and external prerequisites that an individual needs in order to do or to be something (Sen, 1995). Capabilities are created within the context of social life and can be understood as a process whereby social conditions are transformed into resources that empower an ability to act in a certain way. On the other hand, a lack of capabilities produces a shortage of the factors needed to realise the functions or actions required for health (Nussbaum, 2011). In summary, on the one hand health is created by resources for building a sustainable society in peace, freedom and prosperity. On the other hand, the individual’s ability to create health constitutes a resource for creating this kind of sustainable society. This produces a complex intermingling of a web of causes and effects. However, it is evident that social life determines health and that, as a result, socio-political change is needed (Braveman, 2014; Krieger, 1994). To effectuate this change, it has been suggested that public health research needs to be founded on theories and previous knowledge from social science and the humanities (Hammarström & Hensing, 2018; Potvin et al., 2005).

There can be a challenge within health promotion to use methods based on classical epidemiology. The factors of interest to epidemiology are often studied in relation to illness in various social groups (Berkman et al., 2014; Marmot, 2004). The most common determinants used in social stratification research are gender, education, and income (Rostila & Toivanen, 2018). These determinants might not be enough in the analysis of conditions for health equity. Although social determinants are taken into account in epidemiology, the emphasis in these analyses is often directed at risk and vulnerabilities rather than resources and possibilities. In this thesis, health promotion is central and both vulnerabilities and resources are used as concepts that will be explored both theoretically and practically in the empirical material.

**Human rights – the condition for health equity**

Health equity is an ethical and moral concept based on human rights that is used in the field of public health (Braveman et al., 2018; Sen et al., 2010). Health equity is also part of the theory of health promotion (WHO, 1986). It represents the state in which social resources (i.e. determinants) are distributed fairly, and essential health care is accessible to everyone (Braveman et al., 2018; Nicholson
et al., 2016). Health equity builds on the idea that all human beings have the right to access the conditions required to achieve the highest attainable health (WHO, 1948) and it requires that human rights are fulfilled (Lindroth & Andersson, 2021; Pinto & Upshur, 2013; UN, 1948). For this reason, the protection of human rights is itself defined as a determinant of health in general, and of SRHR in particular (Kismodi et al., 2017; WHO, 2015). Having a rights-based approach in public health is thus essential for health equity. A criticism of the rights-based approach is that it focuses too much on the individual person and not on structures in society. However, there is evidence that individual rights affect the conditions for health at both the group and societal levels (Marmot et al., 2021; Pinto & Upshur, 2013). According to a growing body of knowledge, health equity can only be achieved through social transformation at multiple levels (Braveman & Gottlieb, 2014; Krieger, 2019; Marmot et al., 2021).

Health equity can be measured in terms of differences in social exclusion and marginalisation among individuals or groups in relation to conditions associated with social resources and vulnerabilities, i.e., the social determinants that affect health outcomes (Rostila & Toivanen, 2018). To overcome health inequalities, structural changes are required in the distribution of social and economic resources (Braveman, 2014; Rostila, 2011). In order to transform health inequities into health equity, research needs to critically analyse structures in the social environment that are unfair, unnecessary and preventable (Krieger, 2019). However, health equity does not mean that everyone's health can be the same. Instead, health equity involves ensuring that vulnerable groups with the highest levels of ill-health are the subject of compensatory measures that can improve the conditions for health in these groups (Nicholson et al., 2016).

The social determinants of health

In 2004, the WHO put together a committee of researchers in the Commission on Social Determinants of Health, which was led by the epidemiologist Michael Marmot (WHO, 2008). The committee’s goal and vision was to identify the conditions necessary for health equity. The aim was to clarify the knowledge on the relationship between social life and health, and to find tools for making health improvements in cases where the social environment produced unfair, unnecessary and preventable health outcomes. In 2008, the commission published its report, Closing the Gap in a Generation, and stated that the most important aspects of health equity were the non-medical social determinants that impact health outcomes. These social determinants involve the functioning of a
larger set of factors and institutions that determine daily living conditions and future health. For example, the report acknowledged economic policies, the education system, societal norms, social policies, health care systems and the ideologies of political systems as examples of social determinants (WHO, 2008). As was mentioned earlier, health equity is closely linked to the social resources that are available to individuals in their everyday lives. However, one criticism that has been raised is that the monitoring and evaluation of these social determinants often tends to only measure health inequality in relation to the achievement of health outcomes, and does not measure the power structures and social norms that create the conditions for health equity (Penman-Aguilar et al., 2016; Sen et al., 2010).

The Commission on the Social Determinants of Health showed that social inequalities result in systematic health differences between different social groups. This can be understood in terms of the concept of a social health gradient, which cuts through society and results in health problems in groups that are already particularly vulnerable (Marmot, 2005). The commission underscored that national and global institutions need to focus on social justice and human rights in order to promote health equity. A society that does not strive for social justice and human rights risks producing ill-health among vulnerable groups that could have been avoided if more social resources had been made available (WHO, 2008).

Following the publication of the Commission’s report, Marmot and Wilkinson (2005) edited a book entitled *Social Determinants of Health* in which they devoted one chapter to “Social determinants, sexual behaviour, and sexual health”. This chapter discussed the presence of a complex relationship between various social determinants, sexual behaviour and sexual and reproductive health and discussed the effects of gender and sexual identity (Johnson, 2005). However, at the time of publication, in 2005, there were fewer available tools or discussions about how these determinants might be analysed or how their intersecting and mutual effects on health might be understood.

**Intersectionality – illuminating complexity**

The theory of intersectionality seeks to critically examine how societal power structures construct multiple and complex layers of inclusion or marginalisation, i.e., vulnerabilities and resources, in social life (Gahagan & Bryson, 2021; McCall, 2005). Intersectionality represents an important change in thinking about how oppressive power structures, such as for example homophobia, transphobia,
sexism and classism, work in combination with one another rather than separately (Trygg Fagrell, 2022). The theory emerged from gender studies, and its core contribution to the field has been its ability to show that gender alone cannot provide an understanding of marginalisation and discrimination, and thus inequalities. Moreover, it explores social positions within social groups that are often overlooked or interlocked (Collins, 1998; Crenshaw, 1989, 1991).

Intersectionality has been used increasingly frequently in public health research since the 2000s because it enables the development of more complex and in-depth knowledge of the way vulnerability and resources are distributed in society. Intersectionality contributes to public health by producing ‘knowledge diversification’, meaning that the theory opens up new aspects of social life that need to be explored in order to understand the conditions for health equity (Trygg Fagrell, 2022). Bowleg (2008) exemplifies the importance of intersections by discussing practical examples of the ways they might affect an individual’s social position, and thus health, differently depending on whether an individual is for example male and heterosexual or male and homosexual.

The theory of intersectionality is primarily focused on constructed social identities such as gender, sexual identity, transgender identity and race. It can therefore serve as a complement to the theory on the social determinants of health that has emerged from the epidemiological, and more medical, approach and which commonly focuses on social determinants such as income, housing and education (Bauer et al., 2022). However, in a recent report, Build Back Fairer, which was based on the results of the COVID-19 pandemic, Michel Marmot, stated that in order to achieve health equity, public health must deal with identities that are facets of social life, such as the determinant race (Marmot et al., 2021). One example of the response to Marmot’s observation is that xenophobia and racism have more often been incorporated into recent public health research as crucial determinants of health (Abubakar et al., 2022; Devakumar et al., 2022; Shannon et al., 2022). Even though the theories of intersectionality and the social determinants of health are slowly moving closer to one another, there are still distinctive differences in their ontological and epistemological points of departure. As a result, both theories are needed to explore and analyse inequalities and conditions for health equity in SRHR among young people in a more nuanced way.

The measures employed in this thesis for the intersectional analysis of social determinants are: gender, sexual identity, transgender experience, insufficient economic resources, being foreign-born and social welfare recipiency. These social categorizations serve as identifying markers for key populations, i.e., social
groupings in the field of SRHR and HIV prevention (Starrs et al., 2018; UN, 2016) and of general public health (Swedish Government, 2018). Moreover, they are consistent with categorizations made when using intersectionality as an analytical tool (Bauer & Scheim, 2019b; Bowleg, 2012). Intersectionality is used in this thesis as a means of exploring how social determinants embedded in power structures can contribute to our understanding of the conditions for health equity. Intersectionality also informs the sub-studies on the importance of including small and marginalized groups in the analysis.

**Summary**

This chapter has presented a theoretical framework inspired by theories about health, health promotion, health equity, the social determinants of health and intersectionality. These theories have formed the basis for the analyses presented in the dissertation’s studies. The theory of the social determinants of health forms the basis for the studies’ analyses of vulnerabilities to ill-health, while health promotion theory has mainly been used to highlight resources for health. The theory of intersectionality focuses on both vulnerabilities and resources because it attempts to link together and understand social power structures embedded in classical social determinants and create either vulnerabilities or resources. This will be explored in more detail in the next chapter.
METHODS

This chapter presents the empirical material employed in the thesis, which is drawn from a national population-based survey. It also presents the ethical issues involved in this research project. The chapter discusses what it means to measure health and concludes with a presentation of the measures and statistical analyses employed in the outcome areas of unsafe sex, sex against one’s will, transactional sex (Paper I – vulnerabilities), and the ability to engage in safer sex, sexual health literacy, and sex-life satisfaction (Papers II-IV resources).

Study design

The empirical material employed in the studies presented in this thesis is drawn from the stratified and randomised national population-based survey ‘Sexuality and health among young people in Sweden’ also referred to as ‘UngKAB15’6. The inclusion criteria were young people aged 16-29 who were registered in the Swedish national population register. The survey was commissioned in 2015 by the Public Health Agency of Sweden and the data were collected by Statistics Sweden in accordance with the quality requirements of ISO 20252:2012 for market, opinion and social surveys (Statistics Sweden, 2015). The sampling frame was established using data from the Total Population Register, version 31/01/2014. At this time, the sampling frame included 1,730,161 individuals. Design weights were constructed specifying how many persons in the population each respondent could represent. The sample size was determined by analysts and statisticians at the Public Health Agency of Sweden in consultation with Statistics Sweden and was based on legal sex, age and region of residence. A random

6 The overall conceptualization, survey design and questionnaire, as well as the research report and the dissemination of results were conducted and coordinated by the writer of this thesis, Anna ChuChu Schindele, between 2014 and 2017 in close cooperation with colleagues at the Public Health Agency of Sweden.
sample of 29,997 young persons was drawn from the sampling frame, of whom 47 individuals were no longer part of the sample as a result of death or emigration. The final sample included a total of 29,950 young people (Statistics Sweden, 2015)

**Questionnaire**

The questionnaire measured knowledge, attitudes and behaviour (KAB) in the field of SRHR and HIV prevention. The areas examined included: unsafe sex, sex against one’s will, transactional sex, safer sex, school-based sexuality education and sexual satisfaction. In order to ensure that the questions were perceived as relevant by the target group, the questionnaire was sent to civil society organisations working with SRHR and HIV prevention for comments and revisions. Following the consultation period, the questionnaire was adjusted so that it better reflected needs relevant to young people. For example, the response options for reporting sexual identity were expanded from first including heterosexual, bisexual and homosexual to also include “I do not usually categorize myself sexually”. To ensure a good response process associated with the survey questionnaire a cognitive test was conducted in the form of cognitive interviews with eight young people aged 16 to 29 (Statistics Sweden, 2015; Willis, 2018). While completing the questionnaire, these respondents were asked to comment and react if they had difficulties understanding the questionnaire items or if they found them inappropriate. The pilot respondents found the questionnaire interesting and relevant, and the overall report from the piloting session was favourable (Statistics Sweden, 2015). Following the piloting session, a small number of changes were made, including clarifications of the language employed in various themes or questions, such as whether the word sex in a specific question meant self-sex, or sex with a partner.

**Data collection**

The data collection process involved: 1) an introduction letter, 2) an introduction letter presenting the survey to guardians (only for those aged under 18), 3) the questionnaire, 4) a reminder (postcard format) and 5) a second reminder, which also included a letter with a new questionnaire. At all stages, the respondents were given instructions as well as login information if they wanted to answer the survey online via Statistics Sweden’s website. A majority (67 percent) chose to respond via paper, while 33 percent responded online. Of the 29,950 young people who were included in the sample, a total of 7,865 people answered the survey (a 26
percent response rate). During a revision of the incoming respondent data file, 110 respondents were eliminated since their answers were irrational, being highly inconsistent on central survey questions. Following this review, 7,755 respondents were retained for further analysis (Figure 3). Out of the 7755 respondents 4,780 were young women and 2,753 were young men.7

**Figure 3. Data collection process**

Non-response analysis

There are many possible reasons for the non-response, including for example that individuals were unwilling to participate in the survey, could not be reached or were prohibited from participating. The external non-response, i.e., individuals who did not answer the questionnaire at all, comprised a total of 22,085 people. In comparison to the external non-response, the level of survey item non-response was low, with most of those who participated in the survey completing the questionnaire (Statistics Sweden, 2015). Over recent decades, the response rate in Swedish and international surveys has declined significantly (Stedman et al., 2019). As a result, an extensive external non-response analysis was conducted to learn more about potential biases and possible ways of adjusting the data. The non-response analysis showed that the non-response was not random, with the following groups having participated in the survey to a lesser extent: young people with low school grades in year 9, young people who did not graduate from upper secondary school, boys, foreign-born individuals, and young people whose parents had a low level of education. Based on this and previous knowledge about non-respondents, study design and sociodemographic factors, gender (sex) and being foreign-born were used to calibrate design weights to adjust for the impact of the non-response on the study’s conclusions about the study population (Statistics Sweden, 2015).

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7 The gender categorization from Statistics Sweden was based on register data and was limited to the binary categories men and women.
Ethics

Ethics in SRHR research

Ethics involves the various ways in which we can explore and understand the moral life of human beings and represents the rules and guidelines for our ‘dos and don’ts’ in specific situations. Ethics are not equivalent to law, but ethics are often the foundation for laws that regulate research (Israel, 2015; Pinto & Upshur, 2013; WHO, 2019). The moral aspects of research ethics are underpinned by ethical theories, which are themselves not the focus for knowledge development; rather, they aim to make sense of our moral beliefs. These moral beliefs are tightly linked to the social world in which they emerge, and as a result they are sometimes in conflict with one another with regard to which moral beliefs it is most important to follow (Shamoo & Resnik, 2015). Thus, ethics is not a knowledge-informed matter, but rather an ongoing discussion about what values should guide research. Research ethics is focused on ensuring free and informed choices and transparency in relation power to structures within the social context in which the research is conducted (Pinto & Upshur, 2013; WMA, 1964).

Sexual and reproductive health and rights is an area in which societal moral values in the adult world often generate opportunities or limitations in young people’s lives (WHO, 2018a). The involvement of young people in research on sexual and reproductive health and rights often poses legal and moral challenges. Research on SRHR and young people needs to navigate this landscape, and in order to avoid excluding young people from research that may be of interest to them, researchers need a high level of awareness in relation to issues of integrity, disclosure and informed consent (Singh et al., 2019). As a result of the challenges that exist in this field, the WHO has outlined ethical research guidelines for research on young people and sexual and reproductive health and rights (WHO, 2018a). Further, the General Committee on the implementation of the Rights of the Child states that young people aged under 18 have their own right to sexual and reproductive health and, in operationalising Article 12, “the right to be heard”, the convention states that:

“States are encouraged to conduct regular participatory consultations, which are adapted to the age and maturity of the child, and research with children, and to do this separately with their parents, in order to learn about their health challenges, developmental needs and expectations as a contribution to the design of effective interventions and health programs” (UN, 2013).
Age, inclusion and informed consent

Prior to the data collection, ethical approval was sought from the Regional Ethics Review Board in Stockholm. The application (ref. no.: 2015/5:4) stated that the project had the overall aim of providing a scientific basis for different types of interventions aimed at young people (adolescents and young adults) aged 15-29 in relation to their sexual and reproductive health. The application described how the Public Health Agency would use the results for the purposes of monitoring and evaluation, as well as for developing interventions. The application also stated that the material would be used for additional in-depth analyses, which would be published in scientific journals. In order to produce the best conditions for an ethically defensible project, a major emphasis was placed on formulating the application for ethical approval. It stated that both the initial study and the subsequent research that would be published in academic journals would provide a basis for meeting the goals of Sweden’s national HIV strategy (at this time, the national SRHR strategy had not been launched). It also stated that Statistics Sweden, would conduct the data collection and that the Public Health Agency of Sweden and Statistics Sweden would guarantee clarity in obtaining informed consent from study participants.

In planning the UngKAB15 survey, Statistics Sweden and the Public Health Agency of Sweden discussed the ethical aspects of which age groups of young people in Sweden should be included in the project. Statistics Sweden considered the survey topics to be sensitive, and therefore took advice from their in-house ethics board. As a result, Statistics Sweden imposed a requirement that the parents of youths below the age of 18 should receive a separate introduction letter presenting the study and its background and aims. The Public Health Agency was initially of a different opinion but then agreed to follow the advice from Statistics Sweden. Moreover, the discussion on the respondents’ age in relation to the survey topic led to the Public Health Agency only including young people aged 16 and over. The age of 16 years has long constituted the median age for sexual onset with a partner in Sweden. Following the recommendations from Statistics Sweden, those under the age of 18 had an introductory letter sent to their parents/guardians. This “letter for guardians” included information about the survey and specified a contact person at the Public Health Agency of Sweden who would be able to answer any questions relating to the survey and the Public Health Agency’s work monitoring SRHR and HIV.
No data on ethnicity

Even though UngKAB15 was launched before the introduction of the European Data Protection Law (GDPR) (EU, 2016), Sweden had strong regulations on personal data in the Personal Data Act\(^8\) (Swedish Parliament, 1998). Based on the restrictions specified in this act, the survey included no questions about ethnicity\(^9\). The law is intended to safeguard people from unethical research. In doing so, however, the law may also hinder research concerning important aspects of social life. Consequently, the law makes it challenging to understand the scope of racism, xenophobia and hate crimes, which are important factors to explore within the theory of intersectionality. Due to the Personal Data Act, questions about race or ethnicity could not be included in the UngKAB15 survey. Consequently, this research project is unable to include race or ethnicity, which are perspectives that are important for an intersectional analysis. This can be seen both as an ethical dilemma and a methodological problem in quantitative intersectional analyses in Sweden.

Ethical approval

The Regional Ethical Review Board in Stockholm approved the survey and its study design on April 9, 2015 (The Regional Ethics Review Board in Stockholm, 2014).

Measuring SRHR

The word measure has a dual meaning. It can be used to mean assessing importance, effect, size or value (verb), or to mean some kind of commitment, plan or course of action taken to achieve a particular purpose (noun). Measure likewise has a dual meaning within the field of public health. The first meaning involves the use of indicators to measure social determinants and health outcomes, while the second focuses on taking relevant measures, or actions, to improve them. Swedish public health policy states that health should not only be measured but that these measurements should be supplemented with relevant actions in order to promote change.

However, there has been criticism of the public health sector for only monitoring and not taking the actions needed (Plamondon, 2020; Swedish

\(^8\) Personuppgiftslagen - PUL

\(^9\) In Swedish law, ethnicity has replaced the concept of race.
Government, 2016). To overcome this, the measurement of health in general have to be grounded in theories, such as the theory of the social determinants of health, and in policies such as those described in the Guttmacher-Lancet report on SRHR, which can provide the monitoring system with a clear goal.

What are the indicators that measure SRHR?

Health monitoring involves measuring consistent indicators repeatedly over time in relation to global and national policy. The cyclical process of action and policy revision should operate continuously (WHO, 2013). As previously mentioned, the indicators used to monitor SRHR and HIV prevention are mainly focused on negative health outcomes or vulnerability. With the new SRHR strategy, there is a need to follow structural conditions, i.e., resources for SRHR. In the global context, some of the most common indicators measured in relation to health are: life expectancy, infant mortality, weight and obesity (BMI), mortality rates, regular smoking/tobacco consumption, self-perceived health, unemployment, mental well-being, cardiovascular disease/hypertension and socioeconomic status (SES)/material deprivation (Albert-Ballestar & García-Altés, 2021). Other than infant mortality, few indicators focus directly on the area of sexual and reproductive health and rights.

The most common indicator used in global HIV prevention work is self-reported condom use (UN, 2016; UNAIDS, 2001, 2023b). The Agenda 2030 provide room for the potential to monitor aspects of SRHR, for example via goal 10 “Reduce inequalities”, goal 3.7 “Make reproductive health care, family planning and education available to all” and goal 5.6 “General access to sexual and reproductive health and rights” (UN, 2015). However, the most clear indicator in Agenda 2030 is sexual violence against women and girls followed by contraceptive use among women (UN, 2021).

Some nations (e.g. Australia, the USA and Sweden) have repeatedly monitored and collected measures focused on SRHR by means of national population-based surveys (ARCSHS, 2020; CDC, 2022; The Public Health Agency of Sweden, 2017). However, since the field of SRHR-related population-based surveys is not yet fully co-ordinated by a UN agency, it is not entirely clear how many national surveys exist; nor is there any definition regarding how well integrated the components sexual health, reproductive health and sexual and reproductive rights need to be in order for a national survey to qualify to be viewed as an SRHR survey of young people. At the same time, efforts are being made by the WHO and the Human Reproduction Programme (HRP) to develop a survey instrument
that can contribute to improving comparability of indicators across contexts (Gonsalves et al., 2021).

To conclude, there is a lack of cohesive institutional work focused on the global use of common indicators to follow health developments in SRHR. Furthermore, Agenda 2030 could do more to facilitate achieving sustainable societies by developing more indicators relating to SRHR framed by goal 10 “Reduce inequality”. There is also an imbalance between indicators that measure vulnerabilities and resources. By using survey questions and statistical methods that are in line with the previously stated theoretical framework—with a focus on health equity, health promotion, the social determinants of health and intersectionality—this thesis uses a national population-based data set to assess health equity.

**Measures, Papers I–IV**

**Measures, Paper I: vulnerability to unsafe sex, sex against one’s will and transactional sex**

Paper I used three SRHR-related outcome variables (unsafe sex, sex against one’s will and transactional sex) that were present in the survey data to explore whether intersectionality might be a valuable tool in analyses of vulnerability in SRHR. These outcomes were chosen because they are defined as key areas for health improvement both globally and in Sweden (Starrs et al., 2018; Swedish Government, 2017; The Public Health Agency of Sweden, 2020). The questionnaire item employed in the analysis of unsafe sex was “Did you/your partner use any of the following types of protection or contraceptive during your most recent sexual encounter?”, with the unsafe sex outcome being based on the response alternative “We did not use any protection, even though it was needed”. The question reflects experiences of the respondents’ most recent sexual encounter as well as all the complex aspects of how and when one should protect oneself.

The item employed in the analysis of sex against one’s will was “Have you ever experienced the following acts against your will?”, and having had sex against one’s will was specified in terms of the two response alternatives “Vaginal sexual intercourse” or “Anal sexual intercourse”. The survey included more examples of sex against one’s will and was not limited to intercourse. In this analysis, however, we chose these two alternatives in order to provide an example of intercourse without consent among both young men and women. The
questionnaire item employed for the analysis of transactional sex was “Have you at some point received any compensation/payment for a sexual act?”, with the response alternatives “Yes” and “No”. The item employed in the analysis of gender was based on a register variable and included the categorization: “Man” or “Woman”. The item on sexual identity was stated as follows in the questionnaire: “Do you consider yourself currently to be: …”, with the response alternatives: “Heterosexual”, “Homosexual”, “Bisexual”, “I don’t usually categorize myself sexually”, “I don’t know” and “Other”. The alternatives employed in the analysis were limited to the first four. Due to the small numbers involved, those who had responded “I don’t know” and “other” were removed from the analysis.

The transgender experience variable was based on the questionnaire item “Are you or have you been a transgender person?”, with the response alternatives “Yes” and “No”. The variable on perceived economy was based on the item “How would you describe your household finances?”, with the four response alternatives: (a) “Very good”, (b) “Fairly good”, (c) “Not very good”, or (d) “Not good at all” being grouped into two categories of alternatives a + b and c + d. The variable being foreign-born was drawn from Statistic Sweden’s register data and was grouped into the two categories: “Born in Sweden” and “Born abroad”. The variable social welfare recipiency\(^\text{10}\) was based on Statistic Sweden’s register and grouped into “Yes” and “No”.

**Measures, Paper II: resources for ability for safer sex**

The outcome variable employed in Paper II was: “I felt that I could suggest and use a condom or other contraceptive if I wanted to”, with the alternatives “Yes”, “No” and “I don’t know”. The outcome variables were dichotomized into one (“Yes”) and zero (“No”, and “I don’t know”). The exposure variable “I have control over my life”, with the alternatives “Completely agree”, “Completely disagree” and “ Unsure”, was grouped as one (“Agree”) and zero (“Disagree, and “Unsure”). The outcome and exposure variables were chosen based on the hypothesis that they capture the association between control over one’s life situation and the ability for safer sex.

The social determinants, i.e., social groups, were: 1) gender, based on the question “What is your sex?”, with the alternatives “Female”, “Male” and “Non-binary”, 2) transgender experience, based on “Are you or have you been a transgender person?”, with the alternatives “Yes” and “No”, 3) sexual identity,

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\(^{10}\) This variable was only used in the first paper since it was found to overlap with the perceived economy variable.
based on “Do you consider yourself currently to be: …”, with the alternatives “Bisexual”, “Heterosexual”, “Homosexual”, “I do not usually categorize myself sexually” and “Other”, 4) economy, based on “How would you describe your household finances?”, with the four response alternatives a) “Very good”, b) “Fairly good”, c) “Not very good” and d) “Not good at all”, which were grouped into two categories of alternatives, a+b and c+d. To explore intersections, gender and sexual identity were analysed in terms of their intersecting positions. The variable being foreign-born was drawn from Statistic Sweden’s register data and was categorized into two groups: “Born in Sweden” and “Born abroad”.

Measures, Paper III: resources for sexual health literacy

In Paper III, sexual health literacy was defined as the perceived knowledge gained from school-based sexuality education that provides one with an ability to take care of one’s sexual health. We used an outcome variable based on the question “Did you, in school, get the knowledge you need to take care of your sexual health?”, with the response alternatives “Nothing”, “Too little” or “Sufficient” grouped into “Sufficient” or “Insufficient” (which included “Nothing” and “Too little”). We explored the exposure variable: “You can learn about sexuality and relationships in several different subjects at school. How much did you learn about...”: 1) the body, 2) sexually transmitted infections (STIs), 3) sexuality, 4) relationships and gender equality, 5) norms and LGBT-perspectives. The exposure variables had the response alternatives: “Nothing”, “Too little” or “Sufficient”, which were labelled as “Insufficient” (including response options “Nothing” and “Too little”) and “Sufficient”. For the purposes of the statistical analyses, the social determinant variable sexual identity was grouped into two analytical groups: “Heterosexual” and “Sexual minority”.

Measures, Paper IV: resources for sex-life satisfaction

In Paper IV the questionnaire item used to analyse sex-life satisfaction was “How satisfied are you with your current sex life?”, with the five alternatives (a) “very satisfied”, (b) “quite satisfied”, (c) “very unsatisfied”, (d) “quite unsatisfied” and (e) “neither satisfied nor unsatisfied”, which were grouped into the two categories of: a + b and c + d. The fifth alternative “neither satisfied nor unsatisfied” was excluded from the analysis since it did not show a clear direction of satisfaction. The questionnaire item used to explore general health was: “How do you perceive your overall health?”, (a) “Very good”, (b) “Quite good”, (c) “Very bad”, (d) “Quite bad” and (e) “Neither good nor bad”, which were again grouped into two
categories: a + b and c + d. The alternative “Neither good nor bad” was excluded from the analysis. As mediators we used the following five social determinants: gender, transgender experience, sexual identity, one’s economic situation and being foreign-born.

The questionnaire item focused on gender was: “Do you consider yourself as…”: “girl”, “boy”, or “I do not want to categorize myself by gender”, which in this paper is referred to as non-binary. The survey item exploring transgender experience was: “Are you or have you been a transgender person”, with the alternatives “Yes” and “No”. The item employed for sexual identity was: “Do you consider yourself currently to be…”, with the response alternatives: “Heterosexual”, “Homosexual”, “Bisexual”, “I don’t usually categorize myself sexually”, “I don’t know” and “Other”. The alternatives employed in the analysis were limited to the first four alternatives, while those who answered, “I don’t know” and “Other” were removed since they were not possible to categorize. The variable employed to explore the individual’s economy was based on the item: “How would you describe your household finances?”, with four response alternatives: (a) “Very good”, (b) “Fairly good”, (c) “Not very good”, and (d) “Not good at all”, which were grouped into two categories: a + b “Sufficient economy” and c + d “Insufficient economy”. The “foreign-born” variable was drawn from Statistics Sweden’s register data, and participants were grouped into two categories: “Born in Sweden” and “Born abroad”.

**Statistical analysis, Papers I–IV**

**Statistical analysis, Paper I: vulnerability to unsafe sex, sex against one’s will and transactional sex**

In order to analyse how gender intersects with the five other social determinants sexual identity, transgender experience, economy, being foreign-born, and social welfare recipiency, we developed a stepwise descriptive intersecting vulnerability analysis, which we exemplified using the three outcome variables: unsafe sex, sex against one’s will and transactional sex. The analysis was conducted in four steps, with the first examining the prevalence of the three outcome variables based on gender only. The second step examined gender and the five other social positions in a bivariate descriptive analysis. The third step examined the outcome variables unsafe sex, sex against one’s will and transactional sex based on gender and the five other intersecting social positions using cross tabulations. The chi-square test ($\chi^2$) and Fisher’s exact test, in cells
smaller than 5, were used to identify the three most vulnerable positions with significant p-values (95% CI).

In order to acquire an overview, in the fourth step we transferred the three most vulnerable locations and mapped them in a more condensed format. The most vulnerable positions within and between the intersections of gender and the other five social positions were mapped in this final stage to provide a visual summary. This intersecting vulnerability analysis thus investigates the location of the most vulnerable SRHR-related positions in their entirety.

The statistical analysis was conducted in STATA (StataCorp. 2017. Stata Statistical Software: Release 15. College Station, TX: StataCorp LLC).

Statistical analysis, Paper II: resources for ability for safer sex

Descriptive statistics were used to explore and present an overview of the outcome variable (ability to suggest safer sex) and the exposure variable (control over one’s life). In the descriptive statistics, the variables were graded with p-values defined as ***p < 0.001, **p < 0.01 and *p < 0.05, based on the Chi-square test. To explore the material more thoroughly, and to adjust for the interplay of the social determinants gender, transgender experience, sexual identity, insufficient economy, being foreign-born and social welfare recipiency, a multivariate logistic regression with adjustment was performed. This was followed by an in-depth intersecting multivariate analysis, which explored the intersection of gender and sexual identity using the reference category man and heterosexual. The odds ratios (ORs) and adjusted odds ratios (AORs) for the regression models were presented with 95% confidence intervals throughout.

The statistical analysis was conducted in STATA, version 15 (StataCorp LLC, College Station, TX).

Statistical analysis, Paper III: resources for sexual health literacy

Descriptive statistics were used to present numbers and proportions with corresponding confidence intervals of self-perceived insufficient knowledge gained from school-based sexuality education. The chi-square test ($\chi^2$) was used to identify group differences. Logistic regression was used to estimate associations (odds ratios) with having the knowledge needed to take care of one’s sexual health in terms of “sufficient” knowledge (coded as 0) or “insufficient” knowledge (coded as 1). In order to investigate whether intersections between social determinants and perceived knowledge are associated with perceived knowledge to take care of one’s sexual health, we applied an additive interaction
approach. This approach permits the investigation of whether the combination of a certain social determinant and insufficient knowledge is associated with a larger effect than would be expected on the basis of the sole effects of the social determinant and insufficient knowledge respectively. Further, to explore and measure intersections, the relative excess risk due to interaction (RERI) was calculated. RERI shows how self-assessed knowledge (sufficient or insufficient) in five different areas of school-based sexuality education intersects with gender, transgender experience, sexual identity, one’s economic situation and being foreign-born. In total, 25 intersections (regression models) were explored.

The statistical analysis was conducted in STATA, version 16 (StataCorp LLC, College Station, TX) and R (4.1.2).

**Statistical analysis, Paper IV: resources for sex-life satisfaction**

Descriptive statistics were used to provide an overview of the outcome variable sex-life satisfaction. Frequency tables with p-values were used to investigate potential intersections between subgroups based on the social determinants gender, sexual identity, transgender experience, economy and being foreign-born. In order to explore the association between sex-life satisfaction (exposure) and good health (outcome), univariate and multivariate logistic regression models were employed. The odds ratios (ORs) and adjusted odds ratios (AORs) for the regression models were presented with 95 percent confidence intervals. The models included gender, transgender experience, sexual identity, economic situation and being foreign-born as adjustment variables.

Finally, to explore intersections in sex-life satisfaction by social determinants, conditional cross tabulations were performed, stratified by gender. To avoid overly small groups in the regression models and the conditional cross tabulations, the variable gender was limited to boys and girls. In order to more truly portray the general population of young people in Sweden, p-values, proportions, ORs, AORs and confidence intervals were based on calculations that took sampling weights into consideration.

Statistical analysis was conducted in STATA (StataCorp. 2017. Stata Statistical Software: Release 16. College Station, TX: StataCorp LLC).
Summary

This chapter has presented the empirical material drawn from parts of the UngKAB15 survey and has presented the ethical reasoning underlying the thesis. The chapter has also discussed what it means to measure health, and the final section presented the measures and statistical analyses used to focus on the outcome areas of unsafe sex, sex against one’s will, transactional sex (vulnerabilities) and the ability for safer sex, sexual health literacy, and sex-life satisfaction (resources). The next chapter will present the main findings.
This chapter presents the main results that emerged from the analyses.

**Intersecting vulnerabilities to unsafe sex, sex against one’s will and transactional sex**

The main finding from Paper I is that there is a need for policies and population-based surveys to be accompanied by an intersectional understanding of vulnerable positions in relation to SRHR. Otherwise, vulnerable groups may be excluded from SRHR interventions and thus left behind. Intersectionality provides a means whereby vulnerable positions within the field of SRHR can be unlocked and made visible.

Paper I aimed to explore intersecting vulnerable positions within three SRHR-related outcome areas: unsafe sex, sex against one’s will, and transactional sex, via the development of a stepwise descriptive intersecting vulnerability analysis. More specifically, the analysis explored how gender intersects with five other social determinants: sexual identity, transgender experience, insufficient economic resources, being foreign-born and social welfare recipiency. When investigating the overall prevalence of the three outcome variables (unsafe sex, sex against one's will and transactional sex), the results were expected based on ideas found in policy documents such as the ICPD documents on SRHR and the global goals for gender equality in Agenda 2030: women are more vulnerable than men. However, when gender was analysed using data on the intersections between gender and the five determinants, the findings showed more complex and nuanced results. When the most vulnerable positions in relation to the three outcome variables were mapped, the findings did not point solely to being a

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11 This variable was only used in the first paper since it was found to overlap with the economy variable.
woman as a vulnerable position, but to various combinations in the intersections between gender and the five other social determinants, (a) for unsafe sex: being a man and homosexual; (b) for sex against one’s will: being a woman and bisexual; and (c) for transactional sex: being a man and having transgender experience. The intersectional analysis thus made it clear that some young men may have a higher level of vulnerability than women in relation to various SRHR-related health outcomes.

Mapping the results of the stepwise descriptive intersecting vulnerability analysis indicates how gender intersects with sexual identity, transgender experience, perceived economy, being foreign-born and social welfare recipiency to produce vulnerable positions. In total, the scheme presents a visual understanding of how gender intersects with variations in the five positions and generates vulnerable positions in relation to SRHR. The scheme can be used as a model for a descriptive intersectional overview of various health outcomes and constitutes a method in itself (Figure 4).

**Figure 4. The descriptive intersecting vulnerability scheme on health outcomes related to SRHR among young people in Sweden**

<table>
<thead>
<tr>
<th></th>
<th>The most vulnerable position</th>
<th>The second most vulnerable position</th>
<th>The third most vulnerable position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsafe sex</td>
<td>Man and Homosexual</td>
<td>Woman and Social welfare recipiency</td>
<td>Man and Insufficient economy</td>
</tr>
<tr>
<td>Sex against one’s will</td>
<td>Woman and Bisexual</td>
<td>Woman and Social welfare recipiency</td>
<td>Woman and Insufficient economy</td>
</tr>
<tr>
<td>Transactional sex</td>
<td>Man and Transgender experience</td>
<td>Man and Bisexual</td>
<td>Woman and Bisexual</td>
</tr>
</tbody>
</table>

**Intersecting resources for safer sex**

The main finding from Paper II was an association between young people’s control over their life situation and their ability for safer sex. Control over life can thus be understood as a resource for the ability for safer sex. Moreover, it became clear that gender alone cannot explain all the differences found in resources for safer sex.

Paper II aimed to explore the association between having control over one’s life and the ability to suggest safer sex. More specifically, the paper explored the associations between gender and transgender experience, sexual identity,
insufficient economy and being foreign-born. The paper also conducted an in-depth analysis of the intersection of gender and sexual identity in relation to young people’s control over their life situation and ability for safer sex. Based on the intersections between gender identity (men, women and non-binary) and sexual identity (heterosexual, bisexual, open sexual identity), twelve intersecting social positions (Figure 5) were analysed in a multivariate logistic regression analysis.

Figure 5. The twelve intersecting social position analysed in paper II

<table>
<thead>
<tr>
<th>Gender and heterosexual identity</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man and heterosexual</td>
<td>2406</td>
</tr>
<tr>
<td>Woman and heterosexual</td>
<td>3890</td>
</tr>
<tr>
<td>Non-binary and heterosexual</td>
<td>19</td>
</tr>
<tr>
<td>Gender and homosexual identity</td>
<td></td>
</tr>
<tr>
<td>Man and homosexual</td>
<td>54</td>
</tr>
<tr>
<td>Woman and homosexual</td>
<td>83</td>
</tr>
<tr>
<td>Non-binary and homosexual</td>
<td>3</td>
</tr>
<tr>
<td>Gender and bisexual identity</td>
<td></td>
</tr>
<tr>
<td>Man and bisexual</td>
<td>81</td>
</tr>
<tr>
<td>Woman and bisexual</td>
<td>334</td>
</tr>
<tr>
<td>Non-binary and bisexual</td>
<td>18</td>
</tr>
<tr>
<td>Gender and open sexual identity</td>
<td></td>
</tr>
<tr>
<td>Man and I don’t usually categorize myself sexually</td>
<td>107</td>
</tr>
<tr>
<td>Woman and I don’t usually categorize myself sexually</td>
<td>239</td>
</tr>
<tr>
<td>Non-binary and I don’t usually categorize myself sexually</td>
<td>14</td>
</tr>
</tbody>
</table>

The analyses did not produce statistically significant results, due to the small size of some of the groups. Nevertheless, the model shows a pattern whereby being a man and belonging to a sexual minority in terms of being homosexual (OR 1.89) or bisexual (OR 1.70) was associated with having more resources for safer sex by comparison with the reference category of being a man and heterosexual. However, the position of being a man and not usually categorizing oneself sexually was associated with lower odds (OR 0.58) for the ability to suggest safer sex. The pattern among women and non-binary persons was that sexual minorities had lower odds for safer sex. At the same time, being a woman and heterosexual was associated with having more resources (OR 1.61) for safer sex. The position
of being of non-binary gender was not associated with higher odds for the ability to suggest safer sex in any position compared to the reference category, being a man and heterosexual.

**Intersecting resources for sexual health literacy**

The main finding from Paper III was an association between perceived insufficient knowledge from school-based sexuality education, in all explored knowledge areas, and higher odds of reporting not being able to care for one’s sexual health and thus having less resources for sexual health literacy.

Paper III aimed to explore how perceived knowledge (sufficient or insufficient) about taking care of one’s sexual health is associated with interactions between knowledge gained from school-based sexuality education and social determinants, and in relation to intersectional effects. The association with perceived knowledge regarding five topics (the body, sexually transmitted infections, sexuality, relationships and gender equality, and norms and LGBTQI+ perspectives) was explored in relation to the social determinants, gender, transgender experience, sexual identity, economic situation and being foreign-born.

The positions with the highest significant odds ratios (OR > 1 ), and significant excess risk due to interaction (RERI) among the social determinants explored were found in the following five interactions: 1) belonging to a sexual minority and having insufficient knowledge about the body, RERI 7.58 (CI: 2.52-12.64), 2) belonging to a sexual minority and having insufficient knowledge about norms and LGBTQI+ perspectives, RERI 6.46 (CI: 4.23-8.69), 3) belonging to a sexual minority and having insufficient knowledge of STIs, RERI 4.76 (CI: 1.88-7.64), 4) belonging to a sexual minority and having insufficient knowledge about sexuality, RERI 4.75 (CI: 1.71-7.78), 5) belonging to a sexual minority and having insufficient knowledge about gender equality, RERI 4.51 (CI: 2.67-6.36).

Consequently, in all five knowledge areas, the highest excess risk of having insufficient knowledge was associated with belonging to a sexual minority. Gender did not generate a significant excess risk due to interaction in any of the five knowledge areas. Since the group of individuals with transgender experience was small, the result for this group is uncertain. The highest excess risks among youth with transgender experience were found in the knowledge areas “the body” and “norms and LGBTQI+ perspectives”. There is a pattern showing that young
people with transgender experience perceive the knowledge they have gained from school-based sexuality education to be insufficient to a substantial extent.

**Intersecting resources for sex-life satisfaction**

The main finding from Paper IV was a univariate association between being satisfied with one's current sex life and perceived overall good health, OR 2.46, (CI: 2.10-2.88). This association remained and became slightly stronger in the adjusted model, AOR 2.49, (CI: 2.10-2.96). Thus, young people may use sex-life satisfaction as a potential resource for good health. However, this resource is unequally distributed, since boys and non-binary gendered youth are less satisfied with their current sex life than girls.

Paper IV aimed to explore the association between being satisfied with one’s current sex life and perceived overall health. More specifically, the paper explored who are most satisfied and thus potentially able to use sex-life satisfaction as a resource for health, and how this is related to the intersections of gender, transgender experience, sexual identity, one’s economic situation and being foreign-born.

The analysis showed that the most resourceful position, based on significant results, was being a girl and having a sufficient economy, of whom 86 percent reported being satisfied with their sex life. Moreover, being a girl and foreign-born, being a girl and heterosexual, and being a girl and bisexual also appeared to constitute resourceful positions, but these results were not statistically significant. The same was found for being a boy and homosexual, or a boy and foreign-born. Based on the intersecting analysis, we conclude that one’s economic situation is a factor that creates health disparities among girls, since girls with sufficient economic resources were more satisfied with their sex life.

**Summary**

This chapter has shown that the overall and main finding is that intersectionality constitutes a useful tool for exploring the conditions for health equity in SRHR among young people. The use of intersectional analysis provided the basis for developing in-depth and nuanced knowledge about vulnerability and resources by examining the intersections between gender and other social determinants: sexual identity, transgender experience, economic situation, social welfare recipiency and being foreign-born. The different intersectional analyses thus illustrate the complex patterns of vulnerability and resources that are found in the
various health outcomes examined. The findings show that gender alone, which is the most common basis for stratification used in relation to health outcomes, needs to be complemented with other intersecting social determinants. Moreover, the complexity in the results shows that power structures linked to groups defined by, for example, gender and sexual identity can be associated with vulnerability in relation to one health outcome but with resources in relation to another. Before discussing the main findings, next chapter will discuss methodological considerations related to this thesis.
This chapter presents a discussion of the methods on which the thesis is based and which are employed in the different papers. The chapter also presents an account of known and possible biases that may have influenced the results. The chapter concludes by discussing ethical aspects that make it difficult for young people to make independent decisions about participating in survey-based research.

Overall reflections

Intersectionality and quantitative methods

Measuring intersectionality in population-based surveys is still a matter of ongoing methodological debate. In the transition from a purely qualitative research tradition to quantitative studies, a series of discussions have arisen about how intersectionality should be measured in order to correspond to the original theory adequately. In this debate, part of the core discussion concerns the issue and underlying meaning of additive or multiple research methods (Bauer, 2014; Bauer & Scheim, 2019b; Bowleg, 2012; McCall, 2005). In this discussion, a core question is how a stratified population study can go from only measuring and comparing binary social groups such as women and men to more complex methods, in which in-depth analyses of “groups-within-the-group” are conducted.

A complicating factor is that the original intersectional theory uses quantitative terminology to explain the meaning of intersectionality. For example, Crenshaw (1989) describes intersectionality as being “the interaction between race and gender”. However, the word interaction in a qualitative study often refers to intermingling and is not the same as in a quantitative study, where interaction
involves finding a difference in comparison to other groups. Bowleg (2012), who was early to introduce intersectional theory into public health, also described parts of the theory using quantitative concepts such as “When Black + Lesbian + Woman ≠ Black Lesbian Woman”. Even in this paper, there was no direct transferability between qualitative theoretical language and quantitative methods (Bauer, 2014). This led to discussions of what quantitative methods should be used in the framework of intersectional theory and whether quantitative research can use intersectional theory at all (Bauer et al., 2021; Trygg Fagrell, 2022).

This thesis has employed descriptive statistics and regression methods as tools to present results within an intersectional framework. A common criticism of these methods is that they do not sufficiently capture all the intersectional perspectives when studying multiple and complex social groups (Bauer & Scheim, 2019b; Richman & Zucker, 2019). In this thesis, analytical methods that allow more complex measurements than binary stratifications have been viewed as being possible to use. The idea has not been to completely mimic what qualitative studies achieve via their use of intersectional methods. The intention was rather to complement qualitative intersectional methods by applying the perspective of intersectionality to population-based data. Drawing on (Krieger, 2012) who states: “no data, no problem”, the main contribution of this thesis is to present intersectional analyses of population-based data, thereby showing that a population does not consist of binary categories such as men and women but of a diversity of categories, and that this has an impact on health equity.

Intersectionality and population-based survey data

This thesis has employed an intersectional perspective in its analyses. This means that social stratification is used extensively, and that smaller analytical groups with broad confidence intervals have been used in the statistical analyses (Spierings, 2012). From a methodological perspective, this may on the one hand be seen as involving a risk for measurement error, since the ability to make generalisations is reduced by the use of such small groups. On the other hand, the use of smaller groups in a population survey may instead be seen as a strength, since it facilitates the emergence of a better picture of how SRHR is distributed in the total population. Regardless of the chosen perspective, it is important to remember that a cross-sectional study based on a random stratified sample, such as that employed in this thesis, is not intended to produce exact measurements, but rather estimations (Bryman, 2011). The strength of the thesis therefore lies in its inclusive perspective and its ability to describe overall patterns of
vulnerabilities and resources and the complexity that intersectionality brings to the analysis.

What is statistically insignificant may nonetheless be of clinical relevance. Since small groups are included in the analyses, statistical significance is achieved to a lesser extent. This is not necessarily a problem, for several reasons. Firstly, given the national and global policy goals that were stated in the introduction along with the survey design and aim, there is a need for research that includes more identities and social determinants in the analysis. Secondly, this thesis is not focused on clinical trials of medication but on survey-based self-report data. This is also a reason why it is possible to identify patterns and including smaller groups. This form of inclusion provides clinically relevant insights that may be important to our understanding of SRHR. The four papers have striven to be as inclusive as possible and have included a range of sexual identities, and both transgender and non-binary respondents in the analyses. As a result, important patterns of vulnerability and resources have been described. This is seen as a strength, since population-based data otherwise tend only to portray men, women and heterosexuals. To achieve the Agenda 2030 goal of “leaving no one behind”, there is a need for quantitative studies based on national populations to be more inclusive in order to provide equity data.

Data on disability

Social life is in constant change and due to this, social groups and positions that are relevant for an intersectional analysis change over time (Anthias, 2012). The choice to analyse social determinants related to gender identity, sexual identity, economy and place of birth is based on previous research presented in the introduction chapter. More recent research indicate that disability is relevant to explore in relation to health equity in SRHR (Wallin et al., 2022). The UngKAB questionnaire did not include any questions on disability. Due to this, a limitation in the four papers is that a perspective including disability is missing.

**Strengths and limitations of Studies I-IV**

**Systematic errors**

All research studies are biased in one way or another. It is therefore of interest to discuss known biases in order to better understand the results (Althubaiti, 2016). The study design used in UngKAB15 – the survey that generated the data used in this thesis – attempted to reduce bias by stratifying the survey on the basis of
gender, region and age. Moreover, an in-depth non-response analysis was conducted in order to avoid systematic error. In relation to the study design and methods employed, the following biases are of interest in relation to Papers I-IV:

- **Selection bias:** The sampling frame consisted of all young people in Sweden but was stratified based on factors drawn from existing register data such as gender, age and region. This means that these variables are better controlled and more correct than other factors that may potentially affect young people, such as economic resources. Earlier studies indicate that young people from homes with insufficient economic resources tend to participate in surveys less often than others. This may have resulted in young people from homes with sufficient economic resources being overrepresented among the respondents. In total this may have affected the overall results.

- **Participation bias:** This survey sample includes a partially skewed distribution of respondents, since girls responded to a significantly greater extent than boys. Even if this has partially been adjusted for using calibration weights, it has probably affected the answers provided to some extent. This may have had an impact on the data reported by boys.

- **Self-report data:** Self-report data are always biased since they emerge from a subjective experience. However, this is not the same as data being incorrect. At the same time, some measurement errors can occur if the survey questions are constructed in such a way that people misunderstand them or interpret them differently. There is a possibility that this may have occurred.

- **Social desirability bias:** In questionnaire surveys, there is a risk that respondents modify their answers so that they are more socially acceptable or desirable. There is a risk that this may have happened in this study. Among the issues that can be considered more sensitive is that of transactional sex. The numbers of people who have experienced transactional sex are similar to those found in previous studies and over time. However, this may nonetheless have had an impact on the responses analysed in Paper I.

- **Recall bias:** The survey questions are constructed differently in terms of when the events that are asked about occurred, for example having been subjected to a sexual act against one’s will at some point during one’s life. The same goes for perceived knowledge from sexuality education in school. It is possible that this may have affected the answers, since some participants may have forgotten events that occurred a long time ago. This may have had an impact on the data used in Paper I and III.
Random errors

Random errors can occur and lead to the identification of a difference even though no difference exists. This is regulated in the analyses in this thesis via the use of a significance level of 5 percent. That is, the analyses allow for a 5 percent risk of making this type of error (type 1). The alternative type of error (type 2) can also be made if an analysis finds no difference even though a difference does in fact exist. In a cross-sectional analysis, it is never possible to be completely sure that one has not made any random errors (Satake, 2014). Therefore, it is important that the results are linked to theory and previous studies. In this thesis, small groups have been included in the analyses. This means that significance levels have not always been reached, which could increase the risk of random errors. This has been handled by linking the results to theory and previous studies. There are also arguments for allowing non-significant results to be included in the presentation and discussion of findings if they are relevant in relation to the theory and the purpose of a given paper (Spierings, 2012).

Ethical considerations

As was mentioned in the methods section, there were different views on the inclusion of young people below the age of 16. This resulted in the exclusion of young people aged 15 from the survey, even though ethical approval had been obtained to study this group. In retrospect, this may not have been in the best interests of furthering young people’s right to the highest attainable health. Since both the average and median age for sexual debut among young people in Sweden is 16-17 years, the inclusion of the younger group might have provided other and additional knowledge on attitudes and behaviours among youths prior to sexual debut, potentially producing a better foundation for health promotion and prevention work.

Parents’ versus young people’s rights in research

A letter to guardians that was distributed to those aged 16 and 17 may have affected the respondents’ participation. Some parents may have encouraged or demanded participation while others may have opposed it. Approximately 15 guardians contacted the Public Health Agency and informed them that UngKAB15 was a survey that their children should not be asked to participate in. Even though this number is not high in comparison to the total sample size of 30,000 young people, this type of reasoning among parents may have excluded
more potential respondents. Future studies should reflect on how to handle the ethical dilemma of guardians’ rights to insight into their children’s lives and young people’s rights to integrity in relation to SRHR-related health issues. Such discussions would be of assistance in applying the ethical guidelines on integrity promoted by the association of All European Academies (ALLEA, 2017).

**Time to rethink the Swedish law and practice on research ethics?**

Another lesson that can be drawn from this thesis is that it may be time for a discussion and review of the possibilities for securing children's right to participate in research. This is particularly important since research should form the basis for knowledge-based interventions in schools, youth health clinics and general health care. It should be noted that within the Swedish health care system, young people from the age of 13 already have the right not to share information about health visits, such as chlamydia testing, contraceptives, abortion or counselling, with their legal guardians. As a result, it is a contradiction that young people cannot decide for themselves whether they should participate in a research project based on self-report survey data. In the field of SRHR, it has been shown that ethical factors may prevent research among young people, which in turn creates barriers to developing knowledge-based interventions (CRC, 2013; WHO, 2018b). Swedish legislation in other fields generally states that children, in line with their level of maturity, should be allowed to participate in decisions concerning them (Swedish Parliament, 2001, 2017). Participating in research in the field of public health can be equated with being part of the decision-making process that can strengthen their health.

**Sweden needs to collect equity data**

Survey based research in Sweden and the EU is missing out on data about ethnicity or race. As has been mentioned earlier, the UngKAB15 survey included no information on ethnicity or race as a result of restrictions in Sweden's Personal Data Act, with the same restrictions now having been included in the Data Protection Act (EU, 2016). It should be noted that the most common reason for being exposed to hate crime in Sweden is due to ethnicity or race (BRÅ, 2018, 2021). This indicates a presence of systemic racism and the ongoing violation of black and non-white people that may have massive effects on health (Abubakar et al., 2022; Devakumar et al., 2022; Selvarajah et al., 2022). However, this cannot be measured. As a result, we know nothing about how young non-white and indigenous youth are faring in Sweden in relation to SRHR.
Both Sweden and the EU have been criticised by the UN for not compiling statistics based on race, skin colour, or other diversity indicators that encompass ethnicity. The UN has made recommendations that Sweden should collect so-called equity data, which constitute a means to fight discrimination and strive for inclusion and visibility in relation to health with regard to ethnicity. One goal with the collection of equity data is to identify power structures that create barriers based on ethnicity or race (Amnesty International Sweden, 2023; The Swedish Equality Ombudsman, 2023). In order to combat discrimination and racism, there is a need for national surveys to collect equity data, including data on ethnicity, on a voluntary basis (FN-förbundet, 2012). It is known that ethnicity and race are important determinants when measuring health (Krieger, 2005; Marmot et al., 2021). At the present time, however, Sweden is missing out on the possibility of following how these factors relate to vulnerability and resources in the field of SRHR and public health. Moreover, the lack of knowledge about systemic racism creates a barrier to fulfilling the full intention of intersectional analyses in quantitative research.

**Summary**

This chapter has discussed the methods used in the survey and the four papers presented in the thesis and has provided an account of known and possible biases that may have influenced the results. The chapter has also addressed ethical dilemmas that make it difficult for young people to make free and independent decisions about participating in survey-based research, and the absence of data on race and ethnicity. The next chapter will discuss the main findings and their implications for young people in Sweden today.
DISCUSSION OF RESULTS

In this chapter, the main findings from Papers I-IV are discussed, together with previous research and policy in the field.

Vulnerability and SRHR

The overall aim of the thesis has been to explore the conditions for health equity in sexual and reproductive health (SRHR) among young people aged 16-29 in Sweden by analysing how intersecting social determinants create vulnerability or resources.

Paper I resulted in the presentation of a descriptive intersecting vulnerability analysis scheme that visualises how social determinants intersect in three outcome areas: unsafe sex, sex against one’s will and transactional sex. The scheme provides a descriptive intersectional overview and generates insights into the way various positions can be seen as vulnerable. At first sight, when the data were stratified by gender alone, young women were more vulnerable than men. However, when the intersectional scheme was developed and employed it could be seen that young men are also vulnerable when sexual identity and transgender experience are included. The scheme constitutes a contribution to the ongoing discussion on how to explore the complexity of social life through the lens of social stratification, while acknowledging the fact that individuals belong to more than one group at the same time (Bauer et al., 2021; Hancock, 2007; Hankivsky, 2012; McCall, 2005; Trygg Fagrell, 2022; Wemrell et al., 2021). The scheme was inspired by McCall (2005), who suggested an intercategorical design could enable analyses to start from established social categories and to develop intersectional analysis by exploring how these categories relate to each other. McCall (2005) referred to this as a model for the configuration of inequality. The descriptive intersecting vulnerability scheme adds a way of analysing complexity
in social life through intersections based on a ‘second level’ (Hancock, 2007) and can therefore be criticised for not using a multilevel but rather an additive approach (Bauer, 2014; Bauer & Scheim, 2019a; Bowleg & Bauer, 2016; Wemrell et al., 2021). However, some have argued that in quantitative research, an additive approach can identify relevant effects in the context of vulnerability analyses (Reisen et al., 2013; Spierings, 2012) and can be used in other health outcome areas. Therefore, the scheme constitutes a methodological result in itself.

Moreover, since one of the main results from Paper I was that the gender determinant is not sufficient when analysing vulnerable positions, the scheme contributes by presenting the complexity of the conditions for health equity in a pedagogical way and offers a possibility of bridging the gap between research, policy and practice in the field of SRHR. The scheme – and the modelling underlying it – can be used as a tool when developing national and global goals on gender equality, since it also highlights vulnerable groups among men as well as women and also transgender people. This will help to further develop the Agenda 2030 goals on gender equality (UN, 2015). As was mentioned in the introduction, 27 percent of young men in Sweden have at some point experienced sexual acts against their will. This proportion is still much lower than that found among women (54 percent) (The Public Health Agency of Sweden, 2017). However, if the intention of the sustainable goals to “leave no one behind” is to be achieved, young men from sexual minorities and who have transgender experience or insufficient economic resources also need to be included in the goals on gender equality. The results from Paper I are in line with previous knowledge indicating that power structures based on heterosexism and transphobia (Alvidrez et al., 2021) create barriers to equal health conditions.

**Resources for SRHR**

**Ability for safer sex**

The results from Paper II show the complexity found in resources linked to the ability to suggest safer sex. By exploring resources, the paper contributes with knowledge on how health promotion can be focused on interlocked or hidden groups and thus be a tool for finding groups that need compensatory interventions in order to attain health equity (WHO, 1986). Moreover, the results show that being a man and belonging to the sexual identity homosexual or bisexual was associated with having more resources for the ability to suggest safer sex than the
reference category, being a man and heterosexual. Thus, intersectional analysis helped to reveal that the interlocked position of being man and heterosexual resulted in less resources. Studying the intersection of gender and sexual identity in this way suggests that, in contrast to the power structure of heterosexism (Alvidrez et al., 2021; Lennon & Mistler, 2014), heterosexual men cannot convert their sense of control over life into an ability for safer sex. The results suggest that other power structures such as hegemonic masculinity (Connell & Messerschmidt, 2005) may affect heterosexual men’s ability to suggest safer sex. Hegemonic masculinity forms part of sexist power structures and prevents, among other things, equality between women and men. But hegemonic masculinity also has a lock-in effect on males, who in accordance with the hegemonic masculinity norm are expected to behave in a way that excludes emotional maturity and empathy from the definition of what it is to be a man (Connell & Messerschmidt, 2005). This might affect young men’s resources for health. Further research and discussions are required to better understand the links between hegemonic masculinity and heterosexual men's low ability to engage in safer sex, as found in Paper II.

Among women and non-binary-gendered individuals, the analysis showed that sexual minorities had fewer resources for the ability to suggest safer sex. By contrast, being a woman and heterosexual was associated with having more resources for safer sex. The position of being of non-binary gender was not associated with resources for the ability to suggest safer sex in any position in comparison with the reference category, being a man and heterosexual. These results are in line with those reported by Closson et al. (2018), who showed that young women had a greater ability for safer sex than their male peers. Furthermore, the complexity noted in the analysis in Paper II reflects that way in which the ability for safer sex is dependent on power structures relating to both gender and sexual identity (Closson et al., 2018; Lee et al., 2016; Stokes et al., 2016).

Having control over one’s life is a resource that is associated with the potential to experience the ability to execute a health behaviour (Bandura, 1982; Swedish Government, 2018). In contrast, experiencing a lack of control over one’s life situation can generate a sense of social stress, powerlessness, exclusion and discrimination, and can result in a lower ability to enhance one’s social life relative to others (Marmot, 2015). As was mentioned in the introductory chapter, one of the domains in the Swedish National Policy on Public Health is “control over life resources and inclusion in social life” (Swedish Government, 2018). This in turn raises questions about how well-informed professionals who work with young people are concerning the societal conditions that affect control over
one’s life and intersectional perspectives on young people and safer sex. As was also described in the introductory chapter, policy in Sweden has for a long time focused on individual risk behaviour. However, Sweden has a high number of STIs among young people (The Public Health Agency of Sweden, 2022a, 2022b) and to prevent this, new ways of understanding the ability to have safer sex are needed. Interventions that support safer sex need to be tailored in a way that takes intersections between gender and sexual identity into account.

Implications for policy and practitioners would involve learning more about the complexities of safer sex and how these relate to social life. Among men, it would involve focusing on heterosexual young men and their low levels of resources in relation to the ability to suggest safer sex. This is something that should be studied further in future research. In addition to the need for more knowledge about men, the same is true for young people who do not want to categorize their sexual identity. However, the findings from Paper II also pointed to a greater ability for safer sex among homosexual and bisexual men. These results can be of interest – as examples of the ability for safer sex – when tailoring interventions to reduce gonorrhoea and combat antibiotic resistance.

Resources for sexual health literacy

In Paper III, the results showed that insufficient knowledge from school-based sexuality education in five different knowledge areas was associated with higher odds of stating that one was unable to take care of one’s sexual health. This suggests that the knowledge gained from sexuality education could be seen as a resource for sexual health literacy. The results show that school is an arena in which young people can develop knowledge for sexual health literacy, which is in line with previous research (Martin, 2017). However, this ability is not equally distributed among young people since the highest excess risk for having insufficient knowledge in all five knowledge areas was found among young people from sexual minorities. These results are interpreted as an additive interaction resulting in an excess risk of not obtaining the resources one needs from school-based sexuality education.

This excess risk is in line with findings from previous studies and shows how heteronormative and cisnormative power structures affect young people’s resources for health equity, as sexual minorities obtain less knowledge from school (Alvidrez et al., 2021; Lennon & Mistler, 2014). The findings are also in line with previous research stating that sexual minorities report school-based sexuality education to reflect a heteronormative and cisnormative lifestyle and
sexuality, forcing young LGBTQI+ persons to look elsewhere for relevant knowledge and information (Currin et al., 2020).

Moreover, hetero- and cisnormative school-based sexuality education seems not to provide sexual minority youths with relevant information on how to take care of their sexual health. This can lead to a failure to equally distribute resources for the highest attainable health among young people from sexual minorities and young people with transgender experience (CRC, 2003, 2013). The highest excess risk for insufficient knowledge was found among young people with transgender experience. Due to the small groups produced by the analysis, these results were not significant. They are nonetheless of clinical and practical relevance and in line with previous surveys showing that school-based sexuality education is not inclusive in relation to young people with transgender experience (Formby & Donovan, 2020; Shannon, 2016). In total, the results shows that young LGBTQI+ persons in Sweden face barriers in attaining the resources needed for sexual health literacy from their school-based sexuality education.

The results thus point to a need for school-based sexuality education in Swedish primary and secondary schools to be further developed by including more of an LGBTQI+ perspective. Such a change could lead to more inclusive teaching, which would safeguard the intention in the Convention on the Rights of the Child that all young people should be provided with, and not denied, accurate information on how to attain the highest possible sexual and reproductive health (CRC, 2003, 2013). The teaching needs to be inclusive and less heteronormative and cisnormative, for instance by providing fact-sessions, discussions and examples that include perspectives that relate to non-binary, transgender and sexual minorities' lives.

To implement inclusive teaching, universities need to further examine their teacher training programs and to incorporate in-depth information regarding SRHR (Andersson et al., 2020). To reach teachers who have already graduated, additional education in the field of SRHR needs to be implemented. Furthermore, school-based sexuality education could benefit if not only teachers but also school nurses, social workers and psychologists were to have an SRHR education included in their university education programs (Areskoug-Josefsson et al., 2019).

**Sex-life satisfaction as a possible resource for health**

Paper IV showed that young people can use sex-life satisfaction as a potential resource for good health. That sex-life satisfaction constitutes a positive resource for health and well-being is in line with existing knowledge (del Mar Sánchez-Fuentes et al., 2014; Gruskin et al., 2019; Starrs et al., 2018). However, little is
known about this among young people and as a result, the findings from Paper IV fill a knowledge gap in relation to SRHR among young people. Additionally, the intersecting resource analysis showed that sex-life satisfaction is unequally distributed. Boys and non-binary gendered youth were less satisfied with their current sex life than girls. These results might be a consequence of power structures resulting in and maintaining sexism and heterosexism, structures that might affect ideas about sexual satisfaction. However, there is very little knowledge in the field and further studies are needed.

The intersecting resource analysis related to sex-life satisfaction also showed that the most resourceful position, based on significant results, was being a girl and having sufficient economic resources and that the economic situation is a determinant that creates health disparities within the group of girls. Moreover, the results support the idea that sex-life satisfaction needs to be studied on the basis of theories of health and social life (Gómez-López et al., 2019; Jones, 2019; Lorimer et al., 2019; McClelland, 2010) as a complement to the more traditional ways of exploring the number of partners and sexual dysfunction (Björkenstam et al., 2020; Fugl-Meyer et al., 2006; McClelland, 2010; Santtila et al., 2007; Træen et al., 2019; Ventegodt, 1998).

Of the six health outcomes examined in the thesis, sex-life satisfaction is the least studied. This is rather odd, since the creation of health in the context where “people live, work, and love” (WHO, 1986) has long been a goal of health promotion. The subject of sex-life satisfaction has been poorly researched among adults, but particularly among young people. It is therefore necessary to conduct further research on the topic of sexuality as a health resource. There is also a need for further initiatives to provide equal conditions in relation to this resource, particularly among young men and women with insufficient economic resources.

**Reflections on taking measures**

As was mentioned in the introductory chapter, Carl Linnaeus was one of the first to organise and measure human sexuality. Over the years, population-based surveys in both Sweden and globally have used different measurement methods as tools for obtaining measures (CDC, 2022; The Swedish Ministry of Education, 1969). The results from this thesis support the view that there is a need for population-based surveys among young people that – through intersectionality – can reflect the diversity and complexity of social life in relation to SRHR. This is in line with the intention in the Nairobi Statement (ICPD25) and the intention of the Guttmacher-Lancet commission, whose vision is to include all young people
and leave no one behind (Starrs et al., 2018; UN, 2019). The introductory chapter described how the early Kinsey reports showed the diversity of sexual identities and practices in the population (Kinsey et al., 1948; Kinsey et al., 1953). Descriptive statistics from the empirical material employed in this thesis show that 14 percent of young people in Sweden define themselves as not belonging to a heterosexual identity and this is a considerable part of the population (The Public Health Agency of Sweden, 2017). The results from this thesis also show how important it is that survey tools highlight and obtain data that can reflect this diversity. Otherwise, population-based surveys might reinforce rather than change hetero- and cisnormative power structures.

Moreover, the findings from the thesis provide encouragement to take further measures in existing international policy agreements. Today’s global goals for sustainable development on gender equality in Agenda 2030 refer back to the agreements from the ICPD conferences in Cairo and the fourth World Conference of Women (1995) in Beijing (UN, 1995; UNFPA, 1994). This leaves countries with a vision of gender equality and conditions for health equity in the field of SRHR that was stated over twenty years ago, a vision that has not been updated on the basis of the latest knowledge in the field. From research in the field of HIV/AIDS, it is evident that gender is not an exclusive driving factor in the HIV pandemic. Transgender people, sexual minorities and men who have sex with men all constitute key populations in relation to policy and practice (Andersson, 2019; Persson, 2018; Persson et al., 2016; Wolitski & Fenton, 2011). One way of taking measures and making progress would be to develop a joint global policy that guides health monitoring in SRHR. More specifically, the SRHR area can learn from the UNGASS\textsuperscript{12} declaration on HIV/AIDS and the joint UNAIDS programme work, where there is a global consensus on the importance of countries collecting and reporting data that enables knowledge-based preventive work (UNAIDS, 2001, 2002, 2023b).

As was also noted in the introductory chapter, SRHR is currently a component of global and Swedish public health policy (Starrs et al., 2018; Swedish Government, 2018). However, the findings from this thesis show that public health efforts must be directed both at vulnerabilities and resources. The findings of the thesis suggest that in order attain the policy vision of young people’s control over their life resources and their inclusion in social life in relation to SRHR (Swedish Government, 2018), public health work must recognise and engage with both of these areas, using an intersectional perspective.

\textsuperscript{12} United Nations General Assembly Special Session on HIV/AIDS (UNGASS)
Intersectionality reveals complexity in the conditions for health equity

This thesis has contributed new knowledge in the form of an in-depth understanding of how intersectionality constitutes a useful tool for exploring conditions for health equity in SRHR among young people aged 16-29 in Sweden.

The patterns presented in Paper I (unsafe sex, sex against one’s will and transactional sex) and Paper III (sexual health literacy) show that young people who belong to a sexual minority, have transgender experience or have insufficient economic resources are those who are most vulnerable and have the least resources, which in turns means that they have worse conditions for achieving health equity in SRHR. On the other hand, young people who identify as heterosexual, are cis-gendered and have sufficient economic resources are those who are most well-resourced and least vulnerable. The intersectional analyses in Papers I and III show that health equity in SRHR among young people is possibly affected by sexism, homophobia and transphobia, which are linked to the social determinants gender, gender identity, sexual identity and economy.

Paper II (ability to have safer sex) and Paper IV (sex life satisfaction) found different patterns, since heterosexual men appeared to have the least resources for safer sex. Further, in Paper II (safer sex), young men from sexual minorities were found to have more resources for the ability to have safer sex. Moreover, Paper IV found that women from sexual minorities had more resources for sex-life satisfaction than men from sexual minorities. In Papers II and IV, a complex picture emerges that challenges the classic or traditional power structures surrounding the social determinants under investigation. In Papers II and IV,
resources were found in some of the social groups that Papers I and III showed to be vulnerable or to have least resources.

Thus, the use of intersectional analysis facilitated the identification of a range of complex patterns in the fields of vulnerability and resources and has produced improved knowledge about the conditions for health equity in sexual and reproductive health (SRHR) among young people in Sweden.
IMPLICATIONS

Based on the results of the thesis, the following measures are suggested as means of improving conditions for health equity in SRHR.

- Global and national policy on gender equality in SRHR needs to be updated with both knowledge and tools that include intersectionality.
- When intersectionality is employed as an analytical tool, a complex pattern of resources and vulnerabilities in health outcomes is revealed. This can be visualized using an intersecting descriptive vulnerability scheme.
- The intersectional perspective illuminates the way that gender is a determinant that needs to be analysed together with other social determinants in order to understand complexities in vulnerabilities and resources for health, since both are mediated by the intersection of sexual identity, transgender experience, economic resources, social welfare recipiency and being foreign-born.
- Having the ability for safer sex is influenced by young people’s ability to control their lives. Thus, professionals who work with young people need to pay attention to the way that the social conditions of everyday life are linked to young people’s resources for having the ability to suggest safer sex.
- School-based sexuality education in Swedish primary and secondary schools needs to be further developed by including LGBTQI+ perspectives. Such a development could lead to inclusive teaching which ensures that all young people are provided with, and not denied, accurate information on how to attain the highest possible SRHR.
- Teaching in school-based sexuality education needs to be less heteronormative and less cisnormative. Fact-sessions, discussions and examples should include perspectives that relate to the right to health of non-binary persons, transgender persons and sexual minorities.
• To promote inclusive teaching, universities need to further examine their teacher training programs to incorporate in-depth information regarding sexual and reproductive health and rights.
• Since sex-life satisfaction is a potential resource for general health and well-being among young people, the positive aspects of sex-life satisfaction in relation to overall health need to be disseminated and incorporated into sexuality education, public health, healthcare, and health monitoring programs.
• An intersectional approach can illuminate the complexity within power structures linked to social determinants by showing that groups defined by for example gender and sexual identity may be vulnerable in relation to one health outcome but resourceful in relation to another. This will assist in identifying nuanced ways of tailoring interventions on, for example, safer sex.
• Heterosexual young men need interventions that address their needs and that challenge structures of hegemonic masculinity that create barriers to health.
• Young people under the age of 18 need to be given the right to participate in studies, which comply with ethical requirements, about SRHR without asking a guardian for permission.
• Sweden and the EU need to implement the collection of equity data in order to conduct intersectional analyses that include race and ethnicity in quantitative health equity research.
• There is a need for cohesive institutional work towards the global use of common indicators to follow health developments among young people in relation to SRHR.
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