

Challenging childhoods

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CHALLENGING CHILDHOODS

Childhood adversity
and its path to
sexual exploitation



Gabriëlle Mercera

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Challenging Childhoods
Childhood adversity and its path to sexual exploitation

PROEFSCHRIFT

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When you come out of the storm, you won't be the same person who walked in. That's what this storm's all about.

Haruki Murakami

Paranimfen

Hanneke Ruiter

Roel Kooijmans

TABLE OF CONTENTS

Chapter 1	General introduction	9
Chapter 2	Risk and protective factors for sexual exploitation in male and female youth from a cross-cultural perspective: a systematic review	29
Chapter 3	Sexual exploitation of young men: background characteristics and needs from a life-course perspective	63
Chapter 4	High risk, yet overlooked: a clinical record study on background characteristics of sexually exploited and at-risk girls with mild intellectual disabilities	97
Chapter 5	Prevalence of Adverse Childhood Experiences in adolescents with special educational and care needs in the Netherlands: a case-file study of three special educational and care settings	121
Chapter 6	An intergenerational perspective on Adverse childhood experiences and psychotic experiences in patients with psychotic disorder	149
Chapter 7	General discussion	175
Addendum	Impact paragraph Summary Nederlandse samenvatting About the author Publications Dankwoord	195



Chapter 1

General introduction

Part I: Childhood adversity

Adverse childhood experiences (ACEs) have a cumulative and substantial negative impact on a wide range of health outcomes throughout the lifespan (Afifi et al., 2020; Hamby et al., 2021; Massetti et al., 2020). Due to the developmental vulnerabilities of youth, they are particularly endangered to the harmful effects of ACEs (Barrero-Castillero et al., 2022; Bundy et al., 2018). The World Health Organization defines youth as individuals between the ages of 15 and 24 (United Nations, s.d.; World Health Organization, 2006). In research and practice, the applied age range can vary from adolescence (10 years old) to young adulthood (up to 29). Addressing ACEs early in youth is crucial for promoting healthy development and preventing long-term negative health outcomes (Barnová & Tamášová, 2018).

Originally ACEs were defined as 10 experiences of early exposure before the age of 18 to maltreatment and household dysfunction: physical abuse and neglect, emotional abuse and neglect, sexual abuse, parental separation or divorce, domestic violence, mental illness in the household, household substance abuse, and criminal household member (Anda et al., 2009; Felitti et al., 1998). In recent years, social and environmental adversities have been found to be relevant in the ACEs concept as well, such as bullying, social rejection, poverty, growing up in unsafe communities, out of home placements and experiencing violence outside the family (Afifi et al., 2020; Cronholm et al., 2015; Hawes & Allen, 2023; Karatekin & Hill, 2019). Before moving on to the impact of ACEs on youth's overall health, it is important to explain how the overlapping concepts 'ACEs' and 'trauma' relate to one another. While the concept of 'trauma' in youth has been widely studied, research in the context of the ACEs framework has only emerged in the last three decades for adults (Karatekin et al., 2023) and the last 15 years for children (Struck et al., 2021). In the DSM-5 a traumatic event is defined in the context of Post-traumatic stress disorder (PTSD) as one that is associated with "actual or threatened death, serious injury, or sexual violence" and is mainly conceptualized in relation to a single event (American Psychiatric Association, 2013). Trauma research in children and youth has focused mainly on the specific experiences in line with this definition, in part because many instruments that measure traumatic events are based on the criteria in the DSM-5 (Eklund et al., 2018). This definition does not apply to many ACEs on household dysfunction or adversities in the community (e.g. parental mental health problems, divorce, living with a household member with substance abuse and poverty). The ACE framework emphasizes the importance of prevention by addressing the broader conditions that give rise to ACEs, such as parent-child relationship problems or societal inequalities (Karatekin et al., 2022). In this dissertation we use the commonly investigated operationalization of the original ACEs on abuse, neglect and household dysfunction as a foundation (Felitti et al., 1998).

The mechanisms by which ACEs exert negative consequences on health have found to be dynamic and cumulative, and can be explained by the conceptual model of the ACE pyramid (Centers for Disease Control and Prevention, 2021; Felitti et al., 1998). This model demonstrates how ACEs can lead to severe and prolonged stress, which impairs children's brain development and stress-response systems. These changes can subsequently result in cognitive, social and emotional delays, especially when safe, stable and nurturing relationships in the family or community are absent (Centers for Disease Control and Prevention, 2021; Felitti et al., 1998; Schofield et al., 2013). This can lead to problems with attention, emotion regulation, decision making, coping, learning and attachment, all of which set the stage for behavioral problems, school problems, and health risk behavior, such as substance abuse (Hays-Grudo et al., 2021). Numerous mental and physical health problems are likely to occur as a result of an accumulation of these risks (Centers for Disease Control and Prevention, 2021; Felitti et al., 1998). ACEs also increase the risk of experiencing future adversities. For example, the ACE childhood sexual abuse strongly predicts adult sexual abuse and exploitation (Lalor & McElvaney, 2010; Laird et al., 2020; Ports et al., 2016), with multiple ACEs increasing the risk of revictimization (Ports et al., 2016).

The above illustrates that ACEs can invoke a chain of risk factors, that increases the likelihood of negative outcomes across various domains of a person's life. Studies primarily have focused on these negative effects of ACEs, but it is increasingly recommended to focus on protective factors and preventive interventions as well (Karatekin et al., 2022). In summary, ACEs are a global health concern and societal challenge; without adequate prevention at the population level, ACEs will keep driving up costs for social and healthcare systems (Hughes et al., 2021; Karatekin et al., 2022) and youth will remain at risk for negative health outcomes, retraumatization and ongoing adversities throughout their life-span (Fagan, 2022; Hamby et al., 2021; Wolfe, 2018). Early identification of ACEs is therefore crucial on behalf of youth and their future health.

Identifying ACEs in at-risk youth with special educational and care needs

Certain youth are more vulnerable to ACEs and their consequences, making it essential to pay attention to these at-risk youth. Experiencing socio-economic disadvantages, family instability, involvement in child protection services, emotional and behavioral problems, educational challenges and intellectual disabilities have found to heighten the chances of encountering ACEs (Jones et al., 2012; Madigan et al., 2023; Mersky et al., 2021; Wissink et al., 2015). We refer to at-risk youth, meaning youth who grow up with these experiences or in these environments that can make them more susceptible to ACEs. The challenges that at-risk youth face, often necessitate ongoing interactions with special education and health care institutions. Accordingly, research has demonstrated that ACEs increase the likelihood of special educational and care needs (Kan et al., 2020).

The systematic review of Hughes et al. (2017) demonstrated that research on the prevalence of childhood adversity using the ACE framework has mainly focused on children and adults in the general population, with limited attention to at-risk youth who experience more ACEs (Jones et al., 2012). One of the few examples is a nationally representative longitudinal study on children involved with child protection services in the United States. This study demonstrated that by age 6, approximately 95% of the children experienced at least 1 ACE from the original framework (Clarkson Freeman, 2014). Also, in a study on children aged 8-18 with severe social-emotional and behavioral problems in special education schools in The Netherlands (Offerman et al., 2022) found that 80% experienced at least 1 ACE out of 10 ACEs from the original framework. These prevalences are substantial compared to the general population of school-aged youth, in which the percentage of youth experiencing at least 1 ACE varied from 45% - 66% (Bright et al., 2016; Carlson et al., 2020; Meeker et al., 2021; Turney, 2020; Vink et al., 2019). These percentages illustrate that ACEs are common in the general population of school-aged youth as well (Portwood et al., 2023). Comparisons between studies on ACE prevalence should be done with caution due to variations in study populations, applied age ranges, ACE frameworks, instruments and small sample sizes (Madigan et al., 2023; Massetti et al., 2020). Nevertheless the relatively high numbers implicate that health care and educational professionals who interact with at-risk youth can have an important role in the recognition of ACEs.

Research has demonstrated that professionals not always ask about or assess the presence of ACEs (Jones et al., 2022). This is for example due to a lack of specific knowledge and training on how to adopt trauma-informed care practices or due to experienced time constraints during client contact (Bora et al., 2021; Esden, 2018; Kerker et al., 2016; Sherfinski et al., 2021). Moreover, diagnostic systems in practice still rely upon presenting classifications, problems and symptoms (Bokhour et al., 2018; Van Os, 2018). As a result, healthcare providers may focus on managing symptoms, without exploring the underlying ACEs that could drive these behaviors. This poses a risk for treating symptoms instead of underlying root causes. More knowledge on ACEs in at-risk youth is needed to raise ACE awareness in professionals working with these youth, and to further develop and implement trauma-informed practices that provide guidance for them to address ACEs.

An intergenerational perspective on ACEs and mental health problems

In the identification of ACEs, an intergenerational perspective should be included. Research on intergenerational trauma is emerging in the past decade and has revealed a generational continuity in the number and type of ACEs and mental health problems in parents and their children (Narayan et al., 2017; Schofield et al., 2018). Relationships have been found between the presence of ACEs in mothers and their children, and children's developmental problems, physical health problems, behavioral problems and academic performance (Rowell & Barnett, 2022; Zhang et al., 2022). If parents'

psychological functioning is compromised by either their history of ACEs or ongoing exposure to stress, their capacity to provide their children a nurturing environment may be compromised (Narayan et al., 2023). A dysfunctional family context can exacerbate the impact of ACEs and increase the risk of adverse outcomes, such as mental health problems (Merrick et al., 2020). So ACEs seem to be an important target for intervention, as they appear to be intergenerationally transmitted and may contribute to the development of mental health problems in future generations (Bolhuis et al., 2022). One specific mental health problem that may be the consequence of intergenerational ACE and that is highlighted in this dissertation are psychotic experiences.

The clinical presentations of psychotic disorders vary widely and psychotic symptoms are the most obvious manifestations (Moura et al., 2021). Psychotic experiences include positive symptoms (e.g. hallucinations, delusions), negative symptoms (e.g. emotional withdrawal, difficulty in abstract thinking) and general psychopathology (e.g. anxiety and depression; Moura et al., 2021). Gaining insight into possible underlying causes of this symptomatology may lead to the improvement of prevention strategies, better symptom management and ultimately enhancement of overall health. ACEs have been found to be an underlying risk factor in the development of psychotic experiences in youth and adults (Bailey et al., 2018; Fusar-Poli et al., 2017; McKay et al., 2022; Trotta et al., 2015; Varese et al., 2012). The influence of parental ACEs on the relationship between ACEs and psychotic experiences and disorders has received limited attention. A study of Bolhuis et al. (2022) in the general adolescent population is the first to shed more light on this relationship. ACEs in mothers were associated with more psychopathology in mothers and more ACEs and psychotic experiences in offspring. A better understanding of intergenerational pathways to psychotic experiences and disorders is needed to inform future research and early interventions that address the negative consequences of both parental and children's ACEs.

From the first part of the introduction it can be concluded that the identification of ACEs in youth is vital to recognize at-risk youth, and to understand possible underlying factors for their special educational or health care needs. By addressing intergenerational ACE patterns early, it may be possible to prevent or reduce the severity of mental health problems, including psychotic disorders. This not only helps the individual but can also have positive effects on future generations, contributing to a healthier, more resilient community. Without adequate attention to ACEs, youth remain vulnerable for negative health outcomes, re-traumatization and ongoing adversities. One such adversity is sexual exploitation. In this dissertation a specific focus on sexual exploitation was chosen because it is a major societal and hidden problem, that has received too little attention in research, policy and practice. Sexual exploitation has a profound impact on youth mental health. There is considerable evidence that ACEs are one of the many risk factors for sexual exploitation. Yet, further research is needed on both risk and protective factors to better understand potential pathways to sexual exploitation in youth.

Part II: Sexual exploitation

Sexual exploitation of youth is a global human rights issue. It has profound and enduring effects on the psychological and physical health of youth worldwide (Barnert et al., 2017; Benavente et al., 2022; Moss et al., 2023; UNODC, 2022). Sexual exploitation is a form of human trafficking and involves the use of force, threat, fraud, abduction, the abuse of power or coercion by a human trafficker, aiming to control and exploit individuals for purposes of sexual exploitation (Office of the United Nations High Commissioner for Human Rights, 2000). Any minor induced into commercial sex is a victim of sexual exploitation, regardless of whether the trafficker used force, fraud or coercion (Office of the United Nations High Commissioner for Human Rights, 2000). Sexual exploitation often involves (sexual) violence and abuse, and therefore it can be considered as an ACE itself when experienced as minor. Yet, in research and practice it is mostly considered as a separate concept for which ACEs are a risk factor. Sexual exploitation involves complex dynamics of coercion and abuse, often by perpetrators in organized crime (Hopkins et al., 2023). These factors go beyond the scope of what is originally captured in the ACEs framework. Moreover, an approach in which ACEs are treated as risk factors for sexual exploitation, can contribute to more knowledge to identify at-risk youth and to implement preventive efforts before exploitation occurs. Dutch data on sexual exploitation demonstrated that most victims in The Netherlands are minors, adolescents and young adults up to 29 years old with a mean age of 26 (Nationaal Rapporteur Mensenhandel en Seksueel Geweld tegen Kinderen, 2022). Youth are particularly vulnerable to sexual exploitation due to a combination of developmental, social and environmental factors that perpetrators often exploit (Shepherd & Lewis, 2017).

According to a survey in 2017 it was estimated that 3.8 million adults and one million children worldwide were victims of sexual exploitation (The International Labor Organization, 2017). Nevertheless, data from 148 countries worldwide shows that only 25.000 victims – of whom one-third were minors – were formally reported (The United Nations Office on Drugs and Crime, 2020). The large gap between the estimated and actual reported numbers of victims illustrates that there is a significant challenge in victim identification. Therefore, reliable prevalence data on sexual exploitation is lacking. Identifying victims of sexual exploitation presents multiple challenges. Human traffickers often use covert methods to recruit and exploit their victims. The internet, for instance, facilitates human traffickers to identify, control and groom victims (Kloes et al., 2014; Moss et al., 2023; O'Brien & Li, 2020). Additionally, victims are often reluctant to disclose their experiences of exploitation. This reluctance is driven by feelings of shame and self-blame, fear of their traffickers, concerns about not being believed, and an inability to fully recognize or understand their exploitative situation (Andretta et al., 2016; De Vries et al., 2020; McClain & Garrity, 2011; O'Brien & Li, 2020). This difficulty in recognizing exploitation is particularly evident in youth with intellectual disabilities (Reid, 2018). Moreover, health care professionals often fail to identify victimization due to a lack of sufficient

knowledge and training on sexual exploitation (Chaffee & English, 2015; De Vries et al., 2020). The challenge to identify youth victims of sexual exploitation hampers the possibilities to provide timely and adequate care and support (Baldwin et al., 2011). This is concerning as sexual exploitation can have tremendous and long-term effects on psychological and physical health across the lifespan (Hurst, 2021; Laird et al., 2020). In 2018 the Dutch government launched the program ‘Together against human trafficking’. One of its three central aims is the prevention of individuals from becoming victims of human trafficking and to provide victims with the care and support they need – especially those who are at-risk (Rijksoverheid, 2018). Understanding and identifying risk and protective factors for sexual exploitation in youth can inform targeted prevention and intervention efforts, which is crucial in the context of youth mental health.

Risk and protective factors for sexual exploitation in youth

Numerous risk factors for sexual exploitation in youth have been identified in research, with most studies including solely sexually exploited girls and young women. Individual level risk factors involve mental health problems, a history of abuse and neglect, sexual abuse, criminal activities, youth identifying as LGBTQ+ or intellectual disabilities (Barnert et al., 2017; Franchino-Olsen, 2019). At the family level, domestic violence, conflicts with parents and other types of family dysfunction heightening the risk for sexual exploitation (Barnert et al., 2017; Laird et al., 2020). Risks in the community and society involve peer victimisation, poverty, neighbourhood violence, discrimination and limitation in financial resources (Barnert et al., 2017; Laird et al., 2020). ACEs have been found to be a common risk factor for sexual exploitation. According to a meta-analysis in children worldwide, child sexual abuse increases the odds for sexual exploitation by nearly four times, and neglect and physical and emotional abuse doubled the odds (Laird et al., 2020). Moreover, PTSD was associated with a 5-fold increase of the odds for sexual exploitation. A growing body of evidence illustrates that risk factors are often part of a downstream cycle of adversity (Franchino-Olsen, 2019). For instance, parental substance abuse, physical, emotional and sexual abuse could harm a child’s mental health, coping skills and relationship with their parents. This in turn may lead youth to risky behavior such as running away which makes them easier to become targets for human traffickers (Franchino-Olsen, 2019; Laird et al., 2020; Reid & Piquero, 2016). Still, most studies on sexual exploitation have focused on single risk factors and their unilateral association with sexual exploitation (Laird et al., 2020). A better understanding is needed on risk patterns to sexual exploitation in youth.

Protective factors can mitigate the effects of risk factors (Crandall et al., 2019; Hays-Grudo et al., 2021) and play an important role in reducing the likelihood of sexual exploitation (Landers et al., 2020). The limited availability of studies on protective factors for sexual exploitation identified that positive experiences such as positive and supporting relationships, parental supervision, family

connectedness, higher school grades or school completion may lower the risk for sexual exploitation (Adjei & Saewyc, 2017; Cluver et al., 2020; Franchino-Olsen et al., 2021; Franchino-Olsen & Martin, 2022; Homma et al., 2012; Laird et al., 2020; McNeal & Walker, 2016; Reid, 2014; Reid & Piquero, 2014). More research is needed on the nature of protective factors for sexual exploitation, as this knowledge can inform interventions that help to prevent or overcome adverse experiences and build resilience (Landers et al., 2020).

Youth who are underrepresented in research on sexual exploitation

There are indications that some youth are at increased risk to encounter risk factors for sexual exploitation and have fewer protective factors, for example youth with intellectual disabilities. Youth with intellectual disabilities are at a higher risk of experiencing both ACEs and sexual exploitation compared to their peers without disabilities (Hassiotis et al., 2019; Reid, 2018; Wissink et al., 2015). Intellectual disabilities can range from mild to profound and are characterized by significant limitations in cognitive and adaptive functioning (American Psychiatric Association, 2013). Cognitive functioning includes intellectual abilities such as learning, reasoning, problem-solving, and abstract thinking, while adaptive functioning refers to a person's social skills, conceptual abilities, and practical daily living skills (Schalock et al., 2021). Youth with intellectual disabilities are underrepresented in research on sexual exploitation, the limited available research demonstrated that girls with intellectual disabilities were 5 times more likely to become victims of sexual exploitation compared to girls without intellectual disabilities (Reid, 2018). Human traffickers take advantage of the vulnerabilities and lack of protective factors of youth with intellectual disabilities, such as difficulties in understanding cause and effect, assessing risky situations, setting (sexual) boundaries, communicating or disclosing the assault, a greater dependency on others or a limited social network (Franchino-Olsen et al., 2020; Franklin & Smeaton, 2017; Reid et al., 2018; Wissink et al., 2015). In spite of these vulnerabilities, awareness in health care professionals and educators on sexual exploitation in youth with intellectual disabilities is still sparse. There is a gap in professional's knowledge how to meet these children and families' needs (Franklin & Smeaton, 2017). A better understanding of sexual exploitation among youth with intellectual disabilities can provide more insights into prevention of victimization and support recovery and resilience.

Every young person, regardless of gender, sexual, cultural, social, ethnic or religious background, can become a victim of sexual exploitation (Hill & Diaz, 2021). It is important to acknowledge that young men become victims of sexual exploitation too, though it is often underreported. Societal expectations often dictate that men should be strong, self-reliant, and invulnerable. Such dominant gender norms result in feelings of shame, guilt and self-blame or not seeing themselves as victims (Alaggia, 2005; Edinburgh et al., 2015; Hounmenou, 2017; Josenhans et

al., 2020). Also, professionals tend to view young men as less vulnerable than cisgender young women (Hill & Diaz, 2021; McNaughton Nicholls et al., 2014). These factors make it harder for young men to seek help and to be identified by professionals. Research on sexually exploited young men is essential for addressing their possible unique challenges and needs. By expanding our understanding of their risk factors and needs for more effective prevention and intervention strategies can be developed to ensure that all victims, regardless of gender, receive the support and protection they deserve. There is a need to include these underrepresented youth with intellectual disabilities and young men in research on sexual exploitation, as they may require different approaches to prevention and intervention compared to respectively their peers without intellectual disabilities and female peers (Mitchell et al., 2017; Reid, 2018).

Aim and outline of the dissertation

The overall aim of this dissertation was to advance knowledge on (intergenerational) childhood adversity, and specifically its pathways to sexual exploitation in youth. Insight into ACEs is essential to prevent ongoing adversities, such as for example sexual exploitation (Ports et al., 2016). This dissertation has a specific focus on sexual exploitation because it is a major societal and hidden problem. By shedding light on sexual exploitation, this dissertation can raise more awareness on this public issue that has detrimental effects on youth's overall health and well-being. Comprehensive studies on risk and protective factors for sexual exploitation in at-risk and underrepresented youth are critically needed to develop more targeted prevention and interventions that address their needs effectively. Thereby the part of this dissertation examines the risk and protective factors for sexual exploitation in young men and in young women, including those with intellectual disabilities. As ACEs have found to significantly increase the vulnerability to sexual exploitation, this dissertation specifically explores the prevalence and role of ACEs in the pathway to sexual exploitation.

Despite increased attention to ACEs in research, policy and practice, ACEs continue to be a global health concern that drive up societal costs. More insight into the number and type of ACEs in at-risk youth is needed as it helps to identify the specific adversities these young people face, which is critical for tailoring prevention and intervention strategies. Additionally, there is still limited knowledge about the role of intergenerational ACEs in the onset of mental health problems, for example psychotic disorders. Therefore, the second part of this dissertation aims to deepen our understanding of the prevalence of ACEs in youth with special educational and care needs, as well as the intergenerational effects of ACEs in patients with psychotic disorders.

By conducting a systematic review, **Chapter 2** identifies which risk and protective factors have been associated with sexual exploitation in young women and men worldwide. These insights will identify knowledge gaps and contribute to more targeted prevention and intervention strategies.

The qualitative interview study in **Chapter 3** investigates the background characteristics of sexually exploited and at-risk young men from a life-course perspective. This chapter explores which factors may contribute to the onset of sexual exploitation and other forms of sexual violence, from the perspectives of young men themselves. Additionally, insight is gained into their care and support needs.

Chapter 4 aims to gain insight into the background characteristics and health care needs of sexually exploited and at-risk girls and young women with mild intellectual disabilities or borderline intellectual functioning. By conducting a clinical records study, prevalences of individual, family and environmental vulnerabilities and protective factors are described.

Chapter 5 advances knowledge on ACE prevalence and family risk factors in youth with special educational and care needs. A clinical record study is conducted in three special educational and care settings for vulnerable youth with emotional, behavioral and learning problems.

The quantitative study in **Chapter 6** provides more insight into the intergenerational transmission of ACEs. Using data from a longitudinal multicenter study, the associations between parental ACEs and psychotic experiences and ACEs and psychotic experiences in their offspring are investigated.

The General Discussion in **Chapter 7** will present the main findings and conclusions of this dissertation. Directions for further research as well as implications for practice will be discussed.

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Chapter 2

Risk and protective factors for sexual exploitation in male and female youth from a cross cultural perspective: a systematic review

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Abstract

Background

Sexual exploitation is a global problem that has a detrimental impact on the physical, psychological and socio-emotional wellbeing of victims. Youth are at elevated risk to become victims of sexual exploitation. Understanding factors associated with sexual exploitation is key in prevention efforts and adequate and timely treatment. Therefore this systematic review sets more light on both risk and protective factors for sexual exploitation in male and female youth from a cross-cultural perspective.

Methods

66 studies were selected meeting the following inclusion criteria: original qualitative or quantitative peer-reviewed studies in English, Dutch or German with findings on risk and protective factors associated with sexual exploitation in youth up to 24 years old.

Results

Results show that besides common risk and protective factors in male and female youth worldwide (e.g. adverse childhood experiences, lack of a social network, substance use, running away, positive and supporting relationships), geographical differences were found. In non-Western continents, relatively more environmental factors related to economic vulnerabilities or residential instability were cited. Research on risk and protective factors in countries outside North-America is still limited and protective factors and male youth are underexamined.

Conclusions

In order to fully understand vulnerabilities in youth and address the needs of diverse populations it is important to gain more insight into the broader range of risk and protective factors for sexual exploitation worldwide. Ultimately this will enhance our understanding of the pathways to sexual exploitation, the important role of protective factors to mitigate the risks and identify areas where prevention efforts should be targeted.

Introduction

Sexual exploitation is a global human rights problem and has a detrimental impact on the physical, psychological and socio-emotional wellbeing of victims. It is a form of human trafficking and defined as: 'an actual or attempted abuse of someone's position of vulnerability, differential power or trust, to obtain sexual favours, including but not only, by offering money or other social, economic or political advantages' (UN Secretary-General, 2003). Over the last few decades sexual exploitation has increasingly been recognized as a public health concern (De Vries et al., 2020), although the true scale remains unknown (Chang, et al., 2015; Gerassi, 2015; Ijadi-Maghsoodi et al., 2016). Based on an international survey of the International Labor Organization (2017), it was estimated that globally 3.8 million adults and 1 million children were victims of sexual exploitation. Data from 148 countries over the world however, showed that in 2018 almost 25.000 victims of sexual exploitation were reported, of which one third were children (The United Nations Office on Drugs and Crime, 2020). There appears to be a large gap between estimated and actual reported number of victims, which illustrates the challenge of victim identification. This finally hampers the possibilities to provide appropriate (preventive) care and support (Baldwin et al., 2011). Sexual exploitation is an important concern in youth to proactively address, as they are at elevated risk to become victims and for whom the adverse effects of sexual exploitation on both mental and physical health are tremendous (Hurst, 2021).

There is empirical evidence for a wide range of health consequences of sexual exploitation in youth (Zimmerman & Kiss, 2017; Varma, et al., 2015). Human traffickers often use extreme violence, threat and manipulation to control their victims, creating an environment in which sexually exploited youth are at elevated risk for the development of several mental health issues (Ijadi-Maghsoodi et al., 2016; Wood, 2020) such as post-traumatic stress disorder (PTSD), depression, anxiety, substance abuse, attachment problems, emotion regulation problems and anti-social behaviors (Basson et al., 2012; Clawson et al., 2009; Hossain et al., 2010; Ijadi-Maghsoodi et al., 2016). The frequent combination of physical and sexual abuse and being isolated from their support system may lead to complex trauma (Landers et al., 2017), but also emotional and behavioral difficulties such as interpersonal difficulties, marginalization and criminalization (Gerassi, 2015; Varma, et.al, 2015). Furthermore it may result in physical and sexual health consequences including sexually transmitted infections (STIs), pregnancies, miscarriages, abortions, urinary tract infections, multiple injuries from physical abuse and several undiagnosed chronic medical conditions (Chaffee & English, 2015; Cole et al., 2016). The impact on both mental and physical health of youth victims underlines the importance of appropriate and timely health care and support. However, many victims are still unidentified and thus untreated.

There are a number of barriers which may hamper the identification of victims. For example, internet facilitates the covert non-traceable social nature of contacts (Kloess et al., 2014). Youth often fail to recognize and understand that they are exploited (Baldwin et al., 2011; McClain & Garrity, 2011;

Macy, 2018). For youth with cognitive and adaptive disabilities it is even more difficult to recognize victimization (Reid et al., 2018). They often do not understand what is happening during sexual abuse, may not distinguish a boyfriend from a sex trafficker, may be confused about which sexual behaviors are legal or illegal, are less able to use their right to say no or to communicate about the exploitative situation and are sometimes viewed as less credible by law enforcement (Wissink et al., 2015; Reid et al., 2018). Furthermore, victims who do understand their exploitation are often reluctant to disclose victimization as a result of experiences of self-blame, shame, emotional attachments to the perpetrator or fear of facing charges for criminal activities related to their victimization (Andretta et al., 2016; De Vries et al., 2020). A lack of knowledge on accessible care or cultural and language barriers further limits access to support services (Andretta et al., 2016). Studies have shown that victims of sexual exploitation often interact with health care providers while they are being trafficked (e.g. for the purposes of routine health care, child protection investigations or homelessness services; Baldwin et al., 2011; Chaffee & English, 2015). However, health care providers often fail to identify victimization of sexual exploitation, which is mainly a consequence of insufficient training (Chaffee & English, 2015; De Vries et al., 2020).

An important way of preventing sexual exploitation in youth and its severe consequences is to identify early risk factors (Landers et al., 2020). A systematic review (Franchino-Olsen, 2019) gave insight into a wide range of risk factors for sexual exploitation in children in the United States (e.g. adverse childhood experiences, conflicts with parents, running away, substance use, peer influence, poverty, difficulty in school, poor mental health). Adverse Childhood Experiences (ACEs) are frequently cited risk factors and encompass experiences of physical and emotional abuse and neglect, sexual abuse or household dysfunction (parental substance abuse, mental health problems, incarceration, separation and domestic violence; Felitti et al., 2019). Also, many victims report a long history of out-of-home placement, foster care, involvement in child welfare and juvenile detention (Chohaney, 2016; Landers et al., 2017; Macy, 2018). Youth from poor socio-economical background are especially vulnerable, and countries in West Africa, South Asia, Central America and the Caribbean report higher rates of youth victimization (United Nations Office on Drugs and Crime, 2020). Yet, there is a knowledge gap in regard to the role of protective factors (e.g. having peer relationships, unconditional love of a parent, living in a clean and safe home and opportunities to learn) in vulnerabilities for sexual exploitation (Crandall et al., 2019; Landers et al., 2020; Morris et al., 2021). In addition, much of what is currently known about risk and protective factors for sexual exploitation is based on studies conducted in Western countries, especially in the United States. Such a monocultural perspective can be problematic when applied to the context of non-Western cultures (Gopalkrishnan, 2018; Dalla et al., 2022). Finally, the stereotypical victim of sexual exploitation tends to be female, while victims also include male youth (Choi, 2015). The role of gender in the understanding of risks and protective factors

for sexual exploitation is still limited (Franchino-Olsen, 2019). To date, there is no systematic overview of the literature on research into risk and protective factors against the background of gender and culture. Therefore the current systematic review aims to contribute to prevention efforts, and adequate and timely treatment by providing more insights into the risk and protective factors for sexual exploitation in male and female youth from a cross-cultural perspective.

Method

To conduct and report the current review, the 2020 Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines were followed (Page et al., 2020). The protocol for study screening and selection was registered in PROSPERO (registration number: CRD42022310197, access via: https://www.crd.york.ac.uk/PROSPEROFILES/310197_STRATEGY_20220211.pdf).

Eligibility Criteria

Inclusion criteria were: original peer-reviewed studies with qualitative or quantitative data and analysis; reported outcomes were risk and/or protective factors associated with sexual exploitation; outcomes were antecedents and not consequences of sexual exploitation, studies had to report on children and youth (up to 24 years old) and were written in English, Dutch or German. To make sure factors regarding mental and emotional health states were not consequences of sexual exploitation, an inclusion criteria was that it must be clear that these factors were present prior to victimization. Secondary data (e.g. systematic reviews), opinion pieces and single case-studies were excluded, as well as studies that did not distinguish between sexual exploitation and other forms of human trafficking, studies that included youth and adults but failed to separate results between the groups, and studies that identified characteristics of sexually exploited youth, but from which it was not clear if these heightened or decreased the chances of sexual exploitation. There was no restriction in publication period, but records had to be available electronically for practical purposes.

Information Sources and Search

First, the Cochrane Database of Systematic Reviews, the Database of Abstracts of Reviews, and the International Register of Prospective Systematic Reviews (PROSPERO) were searched to identify if any reviews on the understanding of risk and protective factors in sexually exploited male and female youth from a worldwide perspective had recently been planned or carried out. Second, a systematic search of the PsycInfo, PubMed, Medline, ERIC, Psychology and behavioural sciences collection and Web of Science databases was performed by the first author, with support of an information specialist at Maastricht University. Additionally, the first 100 records of a Google Scholar search were scanned.

These databases were selected to maximize the reach across disciplines. Search terms included three concepts: “sexual exploitation”, “youth” and “risk and protective factors”. The last search was performed on the 10th of October 2022.

Study Selection

Figure 1 shows the PRISMA flow chart. The articles that remained after deduplication (n = 987) were double screened independently by the first and second author for relevance on the basis of titles and abstracts. The remaining articles were screened full-text by two researchers independently, of which 50% double. Discrepancies between them were resolved through the involvement of the other authors until consensus was reached. Additional records were retrieved through forward and backward citation searching. The Rayyan software tool (Ouzzani et al., 2016) was used for study selection and assessment of interrater agreement. The interrater reliability for title and abstract screening was calculated by Cohen’s kappa with a level of agreement of 0.847, which is considered as strong. All steps were guided by the screening and selection protocol.

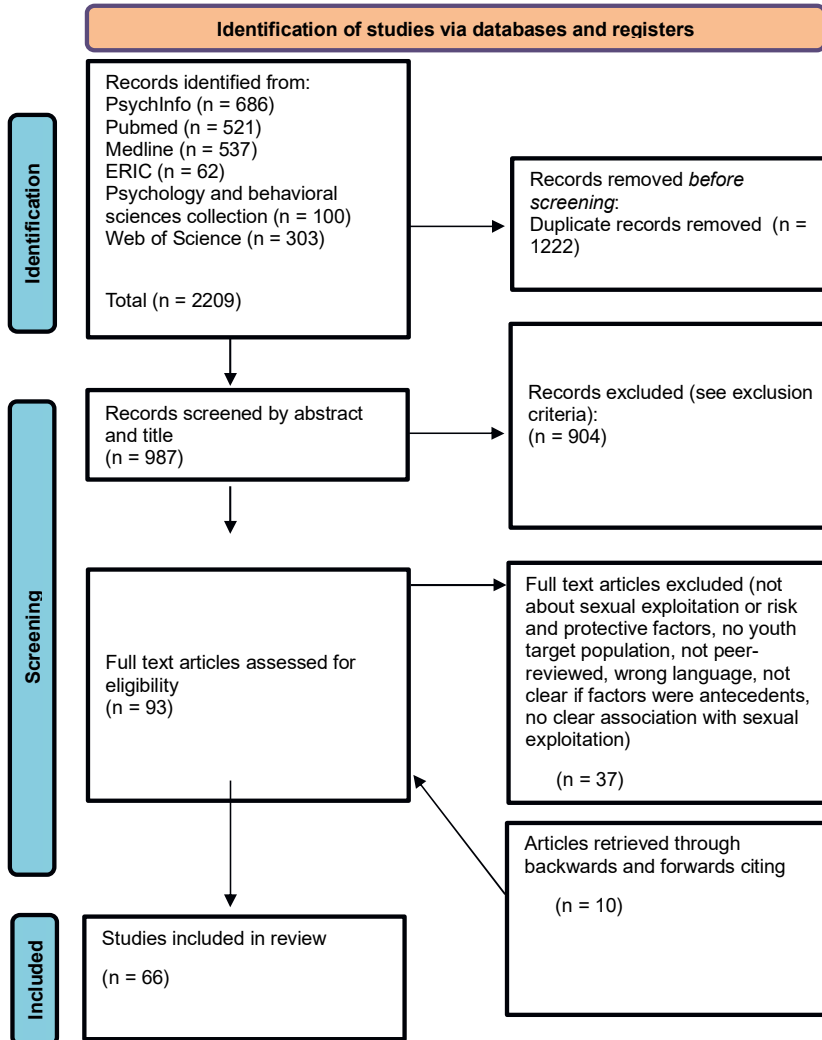


Figure 1. PRISMA diagram summary of the number of found, reviewed, and included studies in this review.

Quality Appraisal

Included studies showed a diversity in designs, ranging from small-scale qualitative designs to quantitative cross-sectional observational, descriptive and mixed methods studies. The Mixed Methods Appraisal Tool (Hong et al., 2018) was used to appraise the methodological quality of the included studies. The MMAT is found to be a reliable and efficient tool to concurrently evaluate the quality of studies with varying designs in a review (Pace et al., 2012). The appraisal was carried out by the first author. When the outcome of the two screening questions was negative ('are there clear research questions?'; 'do the data allow to address the research questions?') the studies were excluded. The outcomes of the further appraisal were used to address limitations in the strength of the evidence of the results.

Synthesis of Results

The primary outcome variables consisted of risk and protective factors for sexual exploitation derived from the quantitative and qualitative results from the included studies. The risk and protective factors found in the quantitative studies were reported as significant to sexual exploitation. In the qualitative studies, the risk and protective factors were drawn from the themes in the data that contributed to youth entering sexual exploitation. Secondary data were the gender and country for which the risk and protective factors were found. To structure the primary outcomes, a framework synthesis approach was used (Carroll et al., 2013). Pre-existing models that were found relevant for understanding the risk for sexual exploitation were the General strain theory (Agnew, 2006; Reid & Piquero, 2016), the multilevel framework (Gerassi, 2015), the ecological framework (Edwards & Mika, 2017) and the ICARE model (Hays-Grudo et al., 2021; Franchino-Olsen, 2021). These models were integrated into the a priori framework (see Table 1). This framework was used to code the results from the included studies against. It organized risk factors in sub-categories of strains, the negative emotional states often caused by strains and the subsequent poor coping behaviors, which all contribute to sexual exploitation (Agnew, 2006; Reid & Piquero, 2016). Given the broad range of cited strains, they were categorized at the individual/family (micro), community (meso) and societal (macro) level (Edwards & Mika, 2017; Gerassi, 2015). The positive counterparts are the sub-categories of protective factors mitigating the risks for sexual exploitation. In subsequent steps, the results were axially coded against the framework, and new codes were created by performing thematic analysis on any evidence that could not be coded against the framework.

Table 1. A priori framework used to code the risk and protective factors

<i>Risk factors</i>		
Strains Negative events at the individual/family (micro), community (meso) and societal level (macro), which increase the likelihood of sexual exploitation.	Negative affect states Experiences of negative emotional states, often caused by strains, increasing the likelihood of sexual exploitation.	Poor coping behavior Maladaptive, unhealthy and destructive behavior, not resolving the problem and actually increasing harm and the likelihood of sexual exploitation.
<i>Protective factors</i>		
Positive experiences Positive events at the individual/family (micro), social (meso) and societal (macro) level that decrease the likelihood of sexual exploitation.	Positive affect states Experiences of positive emotional states that serve as protective factors for sexual exploitation.	Healthy coping behavior Adaptive, healthy and constructive behavior, decreasing the likelihood of sexual exploitation.

Results

Study characteristics

A total of 66 studies were included, of which 39 had a quantitative cross-sectional (59%), 22 a qualitative (33%), and five a mixed-method (8%) design. As shown in Table 2 which summarizes the main findings, there was a diversity in the extent to which male and/or female youth were represented. In total, 36 studies (55%) included data on both male and female youth, of which 21 conducted an analysis on gender differences in risk and/or protective factors. Transgender youth were not included in these analyses. In the other 15 studies no comparison was made between male and female youth (e.g. as a result of small sample sizes or no focus on gender differences). A total of 27 studies (41%) solely focused on female youth and only 3 studies (5%) focused on male youth. The countries in which the studies were conducted were categorized by continent. Most risk and protective factors were cited in studies in North America (n = 38; 60%), of which two studies in Canada and the others in the United States. Risk factors and protective factors cited in Central America (n = 6; Mexico, Haiti), Europe (n = 9; United Kingdom, Spain and Greece), Africa (n = 13; Ethiopia, Uganda, Nigeria, Rwanda, South Africa, Sub-Saharan Africa) and Asia (n = 6; India and the Phillipines) were found less frequently. See Figure 1 for an overview.

In general, the methodological quality of included studies derived from the quality appraisal was adequate, but not flawless. Two studies were excluded on the basis of the screening questions. Many studies reported on male and female youth, with the proportion of males being very small. Therefore results on gender differences were only reported in this study if there had actually been an analysis by gender. For many studies that used qualitative methods, the process of data synthesis was

not (clearly) described. Also, the interpretation of results was not always supported by the data collected such as quotes. Regarding quantitative studies, some didn't account for confounders, which made it hard to draw conclusions on the associations. Especially given that often heterogeneous populations with multiple vulnerabilities were studied. These limitations were taken into account when describing the results. When a study cited for a risk or protective factor had a relatively low appraisal score, in most cases there were multiple studies with adequate appraisal scores that supported the evidence as well.

Figure 1. Overview of the proportion of included studies per country (N = 66)

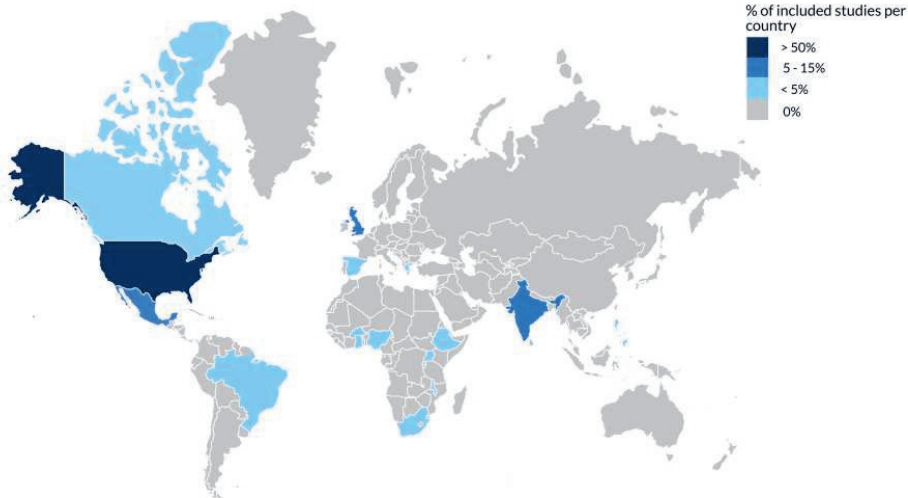


Table 2. Main findings: Revised framework of risk and protective factors and the number of studies and continents in which these factors were identified

Risk factors	Continents	Negative affect states	Continents	Poor coping and risk behavior	Continents
Strains					
<i>Individual/family level</i>					
• Physical/emotional abuse and neglect (n = 24)	na, ca, af, as	• Social emotional problems (n = 7)	na, ca, af, as,	• Substance use (n = 20)	na, af, eu
• Sexual abuse (n = 22)	na, ca, af, as, eu	• Self image / need for affection (n = 6)	eu	• Running away (n = 16)	na, ca, eu
• Compromised parenting / family functioning (n = 18)	na, ca, af, as, eu	• Mental health problems (n = 5)	na, ca, af, as,	• Sexual (risk) behavior (n = 15)	na, af
• Household dysfunction (n = 12)	na, ca, af, as, eu		eu	• Criminal behavior and justice system involvement (n = 6)	na
• Intellectual disabilities (n = 2)	na		na	• Internet and social media (n = 5)	na, af, eu
• (Child) marriage or pregnancy (n = 1)	ca				
• AIDS (n = 1)	af				
<i>Social level</i>					
• (Lack of a) social network (n = 14)	na, ca, af, eu				
• Residential instability (n = 12)	na, ca, af, eu				
• Problems related to school (n = 12)	na, ca, af, as, eu				
• Child welfare or services involvement (n = 6)	na				
• Exposure to violence (outside the home) (n = 4)	na, af				
<i>Societal level</i>					
• Economic vulnerabilities (n = 17)	na, ca, af, as, eu				
• Gender, social and cultural inequalities (n = 5)	ca, af, as				
• Normalization of sex trade in environment (n = 3)	as				
• Failing legal system (n = 2)	eu				
• Terrorism (n = 1)	af				
Protective factors					
<i>Protective and compensatory experiences</i>					
• Positive and supporting relationships (n = 9)	na, eu, af	• Positive affect states	Continents	Healthy coping and behavior	Continents
• School grades and completion (n = 2)	na	• Self worth and setting boundaries (n = 1)	na	• Higher age at first sex (n = 1)	na
• Parental education (n = 1)	na				
• Security of basic needs (n = 1);	af				
• Leisure activities (n = 1)	na				
Demographic factors					
<i>Other risk factors</i>					
• Ethnicity (n = 10)	na				
• Gender (n = 7)	na, eu, af, as				
• LGBTQ+ (n = 4)	na				

na = North America; ca = Central America; af = Africa; eu = Europe; as = Asia
 Number of studies reporting on the risk/protective factor and corresponding color: red = n ≥ 15; purple = n = 5-14; blue = n < 5.

Table 2 presents the revised framework composed of a priori and novel themes about risk and protective factors. A total of 17 categories of risk factors regarding strains were found, 3 negative affect states, 5 poor coping and risk behaviors and 3 demographic variables, adding up to 28 different categories of risk factors. Protective factors in contrast, were cited less frequently: 5 protective and compensatory experiences were found, 1 positive affect state and 1 on healthy coping and behavior, adding up to 7 different categories of protective factors. The risk and protective factors for sexual exploitation by the categorization are presented in Table 2 and show to what extent these factors were present in male and/or female youth of different countries worldwide.

Risk factors

Strains at the individual/family level. A substantial body of research worldwide has linked sexual exploitation to the three categories of ACEs: 1. physical/emotional abuse and neglect, 2. sexual abuse and 3. household dysfunction. Two studies examined the number of ACEs by screening them in a sample of predominantly female victims of sexually exploitation (Kennedy et al., 2021) and a sample of adjudicated male youth (O'Brien et al., 2017). Both studies showed higher overall numbers of ACEs among youth who were sexually exploited in comparison to those who were not.

A history of *physical/emotional abuse or neglect* ($n = 24$) was the most cited risk factor and was found to contribute to the vulnerability for sexual exploitation in both male and female youth (Adjei & Saewyc, 2017; Barnert et al., 2022; Cimino et al., 2017; Cluver et al., 2011; De Vries et al., 2020; Fedina et al., 2019a; Fedina et al., 2019b; Fraley & Aronowitz, 2021; Goldenberg et al., 2015; Greeson et al., 2019; Kennedy et al., 2012; Kennedy et al., 2021; Kiss et al., 2022; Macias Konstantopoulos et al., 2015; O'Brien et al., 2017; O'Brien, 2018; Panlilio et al., 2019; Perkins & Ruiz, 2017; Reid, 2011; Reid, 2018; Roe-Sepowitz, 2012; Servin et al., 2015; Silverman et al., 2007; Varma et al., 2015). There were different results concerning gender differences in the association between physical/emotional abuse and sexual exploitation. In a sample of Sub-sahara African adolescents males were found to report more physical abuse than females (Adjei & Saewyc, 2017). In line with this, in a study on American youth involved in child welfare, males who experienced physical abuse were at higher risk for sexual exploitation (Panlilio et al., 2019). However, two studies on individuals involved in the commercial sex industry, found no significant differences between male and female youth who experienced physical/emotional abuse and neglect and their risk for sexual exploitation (Fedina et al., 2019a; Fedina et al., 2019b).

Sexual abuse ($n = 22$) was a risk factor for both male and female youth worldwide (Adjei & Saewyc, 2017; Boyce et al., 2018; Cimino et al., 2017; Cyders et al., 2021; De Vries et al., 2020; Fedina et al., 2019a; Goldenberg et al., 2015; Kennedy et al., 2021; Kiss et al., 2022; Louie, 2018; Macias Konstantopoulos et al., 2013; Macias Konstantopoulos et al., 2015; O'Brien et al., 2017; O'Brien, 2018; Perkins & Ruiz, 2017; Reid, 2014; Reid & Piquero 2014; Reid, 2018; Self-Brown et al., 2021; Servin et

al., 2015; Silverman et al., 2007; Varma et al., 2015). Overall, sexually abused male and female youth were both at risk for sexual exploitation. However, two studies reported sexually abused males to be more vulnerable. Higher odds for sexual exploitation in male youth who experienced sexual abuse were found among youth in Sub-Saharan Africa (Adjei & Saewyc, 2017) and in a sample of youth offenders in the United States an association between sexual abuse and early age of onset for sexual exploitation was found in males and not in females (Reid & Piquero, 2014).

Household dysfunction (n = 12; parental substance misuse, domestic violence and parental arrests) was a risk factor in male and female youth and was cited worldwide (Cole, 2018; Kennedy et al., 2012; Kennedy et al., 2021; Kiss et al., 2022; Louie, 2018; Macias Konstantopoulos et al., 2013; O'Brien et al., 2017; Panlilio et al., 2019; Reid, 2011; Reid & Piquero, 2014; Reid & Piquero, 2016; Servin et al., 2015). Three studies analyzed gender differences regarding parental substance abuse, but no significant differences between male and female youth were found (Cole, 2018; Reid & Piquero, 2014; Reid & Piquero, 2016). One study conducted in the United States among a sample of youth involved in the child welfare system found that males had a higher risk for exposure to severe violence in the household prior to sexual exploitation compared to females (Panlilio et al., 2019). In the study of Reid and Piquero (2016) among youth offenders in the United States, no gender differences were found regarding caregiver strain among which domestic violence and parental arrests.

Multiple studies (n = 18), from all continents in the world found a connection between *compromised parenting and family functioning* and sexual exploitation. This risk factor was captured in the literature via different measures (e.g. poor nurturing, conflicts between child and parents, unhealthy family relationships, parental attachment and caregiver absence) and was found in both male and female youth (Acharya & Bryson Clark, 2003; Alderson et al., 2021; Barnert et al., 2022; Chohaney, 2016; Cole, 2018; Fraley & Aronowitz, 2021; Helpingstine et al., 2021; Homma et al., 2012; Hornor et al., 2022; Louie, 2018; Macias Konstantopoulos et al., 2013; Macias Konstantopoulos et al., 2015; McNeal & Walker, 2016; O'Brien, 2018; Reid & Piquero, 2016; Self-Brown et al., 2021; Silverman et al., 2007; Williams et al., 2012). A study with a sample of adolescents living in the slums in Uganda found a gender difference in vulnerability: a negative parental attitude towards sexual engagement of their child was associated with higher risk for sexual exploitation in females but not in males (Self-Brown et al., 2021).

Only two studies, both conducted in North America and in a sample of females, found an association between *intellectual and/or physical disabilities* and sexual exploitation. Franchino-Olsen et al. (2020) found higher odds for sexual exploitation for minors with severe physical disabilities and low cognitive abilities compared to peers without these respective disabilities. In line with this, Reid (2018) revealed that for girls with intellectual disabilities, endangering circumstances such as lack of

awareness, inability to self-identify and a vulnerability for manipulation, contributed to a disproportionate risk for sexual exploitation.

Other strains at the micro level were found in two studies conducted in Central America and Africa and concerned *child marriage and/or pregnancy* and *AIDS*, respectively. Boyce et al. (2018) revealed that there were higher proportions of sexual exploitation among female sex workers who were pregnant or married before the age of 16 years old. In a sample of adolescents in deprived South-African communities, Cluver et al. (2011) found that AIDS illness in caregivers and resulting orphanhood predicted sexual exploitation in males and females.

Strains at the community level. Multiple studies (n = 14) found that the (*lack of a social network*) of youth appeared to play an important role in the risk for sexual exploitation. The risks related to the social network could be divided into a lack of a social or support network, exposure to sex trade through friends and family, and peer influences. The lack of a social network or social support was qualitatively studied among predominantly females (one study included one male) in different countries (Canada, United Kingdom, Mexico, Uganda and Nigeria; Acharya & Bryson Clark, 2003; Hallet, 2016; Louie, 2018; Kiss et al., 2022; Servin et al., 2015). When facing adversity such as violence or migration, these youth had no one to rely on which rendered them to be more vulnerable for sexual exploitation. Having friends or family who were involved in sex trade by selling or buying sex was found to be a risk factor for sexual exploitation in both male and female youth in the United States, United Kingdom and Canada (Chohaney, 2016; De Vries et al., 2020; Fedina et al., 2019a; Fedina et al., 2019b; Kennedy et al., 2012; Louie, 2018; Klatt et al., 2014; Macias Konstantopoulos et al., 2015). Two cross-sectional analytic studies included gender as covariate, however they found no significant differences between male and female youth regarding the association between exposure to sex trade and sexual exploitation (Fedina et al., 2019a; Fedina et al., 2019b). Lastly, negative peer influence was found to be associated with sexual exploitation in male and female youth in two studies conducted in the United States, for instance if youths are encouraged by peers in law-breaking behavior, gang involvement or other activities that increased vulnerability (Franchino-Olsen & Martin, 2022; Helpingstine et al., 2021).

Problems related to school were found among both males and females from different countries as a risk factor for sexual exploitation (n = 12). However, the nature of school problems differed between countries. In non-western regions such as India and Africa, studies among females showed that limited access to education heightened their vulnerability for sexual exploitation (Dalla et al., 2020; Kiss et al., 2022; Macias Konstantopoulos et al., 2013; Silverman et al., 2007; Williams et al., 2012). The lack of education was attributed to family poverty, limited economic opportunities in the community or the distance to schools. While in other studies, mainly conducted in the United States, male and female youth did have access to education, but problems such as dropping out of school, lack of

education about sexual exploitation and low grades were associated with sexual exploitation (Adjei & Saewyc, 2017; Chohaney, 2016; Fedina et al., 2019a; Greeson et al., 2019; Hurst, 2021; Hornor et al., 2022; Servin et al., 2015).

Residential instability as a result of homelessness, multiple out-of-home placements and migration, was found to be a risk factor for sexual exploitation, leading to risky (sexual) behaviors to survive (n = 12). It was found to be a risk factor in multiple countries (United States, United Kingdom, Mexico, Greece, Uganda, Nigeria and Spain) in both male and female youth (Chimdessa & Cheire, 2018; Coy, 2009; Digidiki & Bhabha, 2018; Greeson et al., 2019; Fedina et al., 2019a; Hornor et al., 2022; Kiss et al., 2022; Macias Konstantopoulos et al., 2015; Pereda et al., 2022; Rocha-Jimenez et al., 2018; Self-Brown et al., 2021; Servin et al., 2015). Residential instability as a result of migration was particularly found for unaccompanied minors in refugee camps in Greece (Digidiki & Bhabha, 2018) and girls in Mexico, Uganda and Nigeria (Kiss et al., 2022; Rocha-Jimenez et al., 2018). Three quantitative cross-sectional studies analyzed possible gender differences but no significant differences between male and female youth were found (Fedina et al., 2019a; Pereda et al., 2022; Self-Brown et al., 2021).

Six studies, conducted in the United States and Canada, identified *child welfare involvement* as a risk factor for sexual exploitation. Risks included (family) involvement in foster care, residential care, child protection services and poor relationship with services (Fralely & Aronowitz, 2021; Greeson et al., 2019; Hornor et al., 2022; Louie, 2018; Varma et al., 2015; Wright et al., 2021). Four studies included boys and girls, however only one study conducted analyses between gender in which no significant difference between male and female youth was found. In a sample of youth experiencing homelessness, Wright et al., (2021) found that the likelihood of experiencing sexual exploitation in both boys and girls was twice as likely for youth with prior child welfare and justice involvement.

Exposure to violence (such as community and dating violence, being shot, cut or stabbed) was found as a risk factor for sexual exploitation in both male and female youth (n = 4). Three studies were conducted in the United States and one in Uganda. Three studies included male and female youth and overall some mixed results were found regarding gender. Franchino-Olsen et al. (2021) found an association between experiencing violence and increased odds for sexual exploitation in both male and female youth. However experiencing community violence was more common for males than for females. Violence victimization was significantly associated with sexual exploitation for females (Franchino-Olsen & Martin, 2022). Likewise, Self-Brown et al. (2021) only found significant associations between physical dating violence and sexual exploitation in females.

Strains at the societal level. In both male and female youth, a substantial body of research worldwide has linked sexual exploitation to *economic vulnerabilities*, such as poverty, low parental education, debts, financial insecurity, material need and lack of economic opportunities (Acharya &

Bryson Clark, 2003; Barnert et al., 2022; Cole, 2018; Dalla et al., 2020; Dalla et al., 2022; Franchino-Olsen & Martin, 2022; Goldenberg et al., 2015; Klatt et al., 2014; Kiss et al., 2022; Louie, 2018; Macias Konstantopoulos et al., 2013; Macias Konstantopoulos et al., 2015; Njoku et al., 2022; Rocha-Jimenez et al., 2018; Silverman et al., 2007; Williams et al., 2012; Williams et al., 2018). In non-western continents (Africa, Asia, Central America), economic vulnerabilities were more often characterized as environmental factors such as a lack of educational or labor opportunities in the environment and a lack of resources due to migration or living in refugee camps, whereas in western continents, economic vulnerabilities more often stemmed from family factors such as low parental education and family poverty. Overall there were no significant differences between gender.

Other strains at the societal level concerned *gender, social and cultural inequalities* (n = 5), *normalization of sex trade in the environment* (n = 3), *a failing legal system* (n = 2) and *terrorism* (n = 1) and were mainly found to be risk factors in the non-Western continents Asia and Africa (Dalla et al., 2020; Dalla et al., 2022; Digidiki & Bhabha, 2018; Jani & Felke, 2017; Macias Konstantopoulos et al., 2013; Njoku et al., 2022; Silverman et al., 2007; Williams et al., 2012). These studies predominantly involved females and found gender specific vulnerabilities, such as the sexual objectification of women, gender based mistreatment in family, sex work among girls and selling daughters being seen as normative.

Negative affect states. Mental health problems (e.g. mental health problems in general, suicidal ideation and psychoticism) as a risk factor for sexual exploitation were found in five studies, all conducted in the United States (n = 5; Cole, 2018; De Vries et al., 2020; Panlilio et al., 2019; Reid & Piquero, 2014; Reid & Piquero, 2016). One of the four studies that analyzed possible gender differences in a nationally representative sample of youth involved in child welfare found that sexually exploited males had a higher risk for suicidal ideation compared to females (Panlilio et al., 2019).

Seven studies, conducted in North America and Europe, found risk factors regarding *social and emotional* problems in male and female youth, such as difficulty forming healthy relationships, interpersonal problems and negative emotions and affect states (Coy, 2009; Digidiki & Bhabha, 2018; Homma et al., 2012; Macias Konstantopoulos et al., 2013; Macias Konstantopoulos et al., 2015; Reid et al., 2021; Reid & Piquero, 2016). Two studies analyzed gender differences. In a sample of high school students, Homma et al. (2012) found that there were no significant differences in gender regarding the risk factor feelings of hopelessness and impulsivity. Among a sample of male and female youth offenders, Reid and Piquero (2016) found negative emotions only to be associated with sexual exploitation in males and not in females.

Negative self image and the need for affection was found to be a risk factor for sexual exploitation in six studies conducted in the United States and the United Kingdom (Cole, 2018; Coy,

2009; Fogel et al., 2017; Macias Konstantopoulos et al., 2013; Macias Konstantopoulos et al., 2015; Perkins & Ruiz, 2017). The need for affection was only found in studies involving female youth. One study among professionals working with high risk youth, analyzed possible gender differences from the professional's perspective and no differences in gender regarding negative self image as a risk factor for sexual exploitation was found (Cole, 2018).

Poor coping and risk behavior. Multiple studies among both male and female youth showed that *substance use* (drug and alcohol use/dependency, early initiation of substance use), increased the risk for sexual exploitation (n = 20). Two were conducted in Africa (Adjei & Saewyc, 2017; Self-Brown et al., 2021) and one in Europe (Klatt et al., 2014), but most studies were conducted in The United States (Cole, 2018; Cyders et al., 2021; Fedina et al., 2019a; Franchino-Olsen et al., 2021; Homma et al., 2012; Hornor et al., 2022; Louie, 2018; Macias Konstantopoulos et al., 2015; McNeal & Walker, 2016; O'Brien, 2018; Panlilio et al., 2019; Perkins & Ruiz, 2017; Reid, 2011; Reid, 2014; Reid & Piquero, 2014; Reid & Piquero, 2016; Self-Brown et al., 2021; Varma et al., 2015). Of the ten studies that analyzed substance use by gender, only two studies found significant differences between males and females. In a nationally representative sample of youth involved in child welfare in the United States, Panlilio et al. (2019) found that substance use was a risk factor for both males and females, but being male increased the probability of drug and alcohol use. Self-Brown et al. (2021) found an association between alcohol use and sexual exploitation in females who were living in the slums of Uganda.

Running away from home or residential care was cited as a risk factor for sexual exploitation in both male and female youth by a substantial body of research (n = 15), conducted in Europe (Biehal & Wade, 2000; Pereda et al., 2022), Mexico (Servin et al., 2015) and mainly in the United States (Barnertt et al., 2022; Chohaney, 2016; Cimino et al., 2017; Fedina et al., 2019b; Franchino-Olsen et al., 2021; Hornor et al., 2022; Panlilio et al., 2019; Pereda et al., 2022; Reid, 2011; Reid, 2018; Reid & Piquero, 2016; Roe-Sepowitz, 2012; Varma et al., 2015). In general no significant differences in gender were found with the exception of the study of Panlilio et al. (2019) among youth involved in child welfare in the United States, which found that being male increased the probability of running away. Additionally, in one study running away was a predictor in the opposite direction: Klatt et al. (2014) found that running away significantly decreased a person's risk of being sexually exploited.

Sexual (risk) behavior as risk factor for sexual exploitation (n = 15) could encompass age-related risks (a younger age at first sex, having an older boy or girlfriend), survival sex, multiple sexual partners, prior STIs, normalization of unwanted sex or getting into cars with strangers. Risks regarding sexual behavior were found in both male and female youth. Two studies were conducted in Africa (Adjei & Saewyc, 2017; Chimdessa & Cheire, 2018) and the others in the United States (Chohaney, 2016; De Vries et al., 2020; Fedina et al., 2019a; Hornor et al., 2022; O'Brien et al., 2017; O'Brien, 2018; Panlilio

et al., 2019; Reid, 2011; Reid, 2018; Reid & Piquero, 2014; Reid & Piquero, 2016; Roe-Sepowitz, 2012; Varma et al., 2015). Of the five studies that compared male and female youth, only one study found gender differences. Among male and female youth offenders in the United States, Reid and Piquero (2016) found that age at first sexual experience had a significant negative relationship with sexual exploitation for males, while no association was found for females.

Risks regarding the *problematic use of internet and social media* were prevalent among male and female youth in studies conducted in the United States, Spain and Uganda (Fralely & Aronowitz, 2021; O'Brien, 2018; Pereda et al., 2022; Reid, 2018; Self-Brown et al., 2021). Risks included unsupervised access to social media, chatting and forming interpersonal relationship via the internet and sharing sexually explicit personal material (sexting). Two studies compared risk factors between gender. While Pereda et al. (2022) found no significant differences between gender for sharing sexually explicit personal material, Self-Brown et al. (2021) found that among adolescents living in the slums of Uganda, social media use was only associated with sexual exploitation for females.

Six studies (n = 6), all conducted in the United States and involving both male and female youth, found that risks regarding criminal behavior and justice system involvement, such as property crime, crimes against persons, involvement with law enforcement and juvenile detention, were associated with sexual exploitation (Chohaney, 2016; Franchino-Olsen & Martin, 2022; Hornor et al., 2022; McNeal & Walker, 2016; Varma et al., 2015; Wright et al., 2021). Three studies analyzed gender differences, and found that the risk of criminal behavior and justice system involvement for sexual exploitation was significant for both genders (Franchino-Olsen & Martin, McNeal & Walker, 2016; Wright et al., 2021).

Protective factors

Protective and compensatory experiences. *Positive and supporting relationships* were found to be a protective and compensatory experience among male and female youth, lowering the risk for sexual exploitation in studies conducted in the United States, Europe and Africa (n = 9). These positive and supporting relationships could involve parents (parental monitoring and supervision, a two parent family structure, family connectedness; Adjei & Saewyc, 2017; Cluver et al., 2020; Franchino-Olsen et al., 2021; Franchino-Olsen & Martin, 2022; Homma et al., 2012; McNeal & Walker, 2016), but also relationships outside the family (a positive relationship with substitute carers and teachers or having in general at least one person who provides emotional support and trust; Biehal & Wade, 2000; Helpingstine et al., 2021; O'Brien, 2018). Seven studies investigated gender differences, but no significant differences were found in the association between positive and supporting relationships and a reduced chance for victimization.

Five other and less studied protective and compensatory experiences were found. Studies among disadvantaged girls by Reid (2014) and American male and female youth offenders (Reid &

Piquero, 2014) associated a *higher school grade or school completion* with declined chances of sexual exploitation for both genders. Level of parental education was a protective factor for both male and female youth in a population based study by Franchino-Olsen et al., 2021, conducted in the United States. Among Canadian high school students, Homma et al. (2012) found that *involvement in clubs* (e.g. sports) decreased chances for sexual exploitation. However, associations were only significant for females and not for males. Lastly, Cluver et al. (2020) found that *food security* was a protective and compensatory experience among female youth in deprived South-African communities, but no significant association was found for males.

Positive affect states and healthy coping and behavior. Regarding the last two categories of protective factors in the a priori model (positive affect states and healthy coping and behavior), only two studies were detected. Among a sample of system involved survivors of sexual exploitation in the United States (male and female), learning and *being taught self-worth, interpersonal boundaries and sexual limit setting* were found to be important factors mitigating the risk for sexual exploitation (O'Brien, 2018). Regarding behavior as a protective factor, Reid & Piquero (2014) found that American males and females having *first sex at a higher age* reduced the likelihood of initial involvement in sexual exploitation before the age of 17.

Demographics as risk factors

Although the current review investigates whether there are differences between male and female youth with respect to risk and protective factors for sexual exploitation, results indicate that in seven studies *gender* was associated with sexual exploitation as a risk factor itself (n = 7), although results were ambiguous. A study of Wright et al. (2021) showed that females had a higher likelihood of experiencing sexual exploitation and among a sample of homeless and runaway youth in the United States, Greeson et al. (2019) found that those who were sexually exploited were more likely to be female. Among a sample of youth in the slums of Uganda, sexual exploitation was associated with being female as well (Self-Brown et al., 2021). Two qualitative studies indicated a greater risk for females than for males (Biehal & Wade, 2000; Dalla et al., 2022). However, findings from a nationally representative study in the United States revealed lower odds for females experiencing sexual exploitation compared to males (Franchino-Olsen & Martin, 2022). And in another population based study in the United States, McNeal & Walker (2016) found male adolescents to be significantly more likely to experience sexual exploitation by exchanging sex for drugs or money.

Ten studies which were all conducted in the United States found *ethnicity* to be associated with sexual exploitation. Victims were more often from an ethnic or cultural minority compared to youth who were not sexually exploited (Barnert et al., 2022; Fedina et al., 2019b; Reid et al., 2021), such as African

American (Franchino-Olsen et al., 2021; Franchino-Olsen & Martin, 2022; Hornor et al., 2022; O'Brien et al., 2017; Reid & Piquero, 2014), Latino (Greeson et al., 2019) or multiracial (Chohaney, 2016).

According to four studies which were all conducted in the United States, *LGBTQ+* youth had a higher risk for sexual exploitation. Among a sample of homeless youth the odds of being *LGBTQ+* and sexually exploited were two times higher compared to being heterosexual (Hogan & Roe-Sepowitz, 2020). Among samples of homeless youth as well, transgender youth had a higher likelihood of experiencing sexual exploitation (Greeson et al., 2019; Wright et al., 2021). Barnert et al. (2022) found that same sex romantic attraction was significantly associated with exposure to sexual exploitation.

Discussion

This systematic review provides more insight into both risk and protective factors for sexual exploitation in male and female youth from a cross-cultural perspective. A better understanding of these factors is a crucial step towards prevention and adequate and timely treatment. Four main findings are discussed below, pertaining to: 1. common risk factors for sexual exploitation worldwide; 2. underexamined protective factors for sexual exploitation; 3. differences in risk and protective factors between continents; 4. the role of gender in risk and protective factors.

First, the results show common risk factors preceding victimization in both male and female youth worldwide (e.g. physical/emotional abuse and neglect, sexual abuse, compromised parenting and family functioning, (lack of a) social network, economic vulnerabilities, substance use, running away). It is known that different combinations of these risk factors can underlie a youth's vulnerability and that multiple pathways into sexual exploitation exist (Choi, 2015; Reid & Piquero, 2016). By theoretical frameworks, we are able to explain the cumulation of risk factors in which strains (e.g. abuse, family dysfunction and poverty) often result in negative affect states (e.g. mental health and emotional problems) which induce maladaptive coping strategies and risk behavior (e.g. running away, substance use or survival sex) placing youth in vulnerable positions for sexual exploitation (Agnew, 2006; Edwards & Mika, 2017; Franchino-Olsen, 2021; Gerassi, 2015; Reid, 2011, Reid, 2014; Reid & Piquero, 2014; Wilson & Wisdom, 2010). There are some limitations regarding these frameworks. Not one of them is exhaustive because research into vulnerabilities for sexual exploitation often takes Western society and risk factors as a starting point. This systematic review presents a broader overview of both risk and protective factors for sexual exploitation by using a cross-cultural perspective. This is a first step towards a better understanding of vulnerabilities in youth worldwide. Follow-up research should gain more insight into how these risk and protective factors interact against the background of cultural and societal issues, which is key in prevention efforts and timely treatment (Franchino-Olsen, 2019).

Second, protective factors are underexamined. This may reflect a greater focus in research on factors that contribute to victimization than factors that prevent victimization. Yet, one common factor was found in male and female youth worldwide: positive and supporting relationships. This is in line with literature, emphasizing that social support and meaningful relationships are crucial in the context of resilience. They can reduce the impact of adversity, prevent revictimization and promote mental health and positive development (Barnová & Tamášová, 2018; Scoglio, et al., 2022). It is therefore important to learn more about protective factors and their interconnectedness with risk factors for sexual exploitation. Though never applied to sexual exploitation, a framework that captures both risk and protective factors and the effects on development is the intergenerational and cumulative adverse and resilient experiences (ICARE) model (Hays-Grud et al., 2021). Future research should shed more light on the applicability of such a framework for a broader understanding of vulnerability and resilience with regard to sexual exploitation.

Third, besides commonalities in risk and protective factors worldwide, geographical differences were found. Especially for the nature of strains at the community and societal level, which seemed to differ between Western and non-Western continents. In non-Western continents, relatively more environmental factors related to economic vulnerabilities or residential instability were cited (e.g. forced migration, limited access to school or the labor market and lack of basic needs). In Mexico for example, forced migration due to drug violence resulted in a lack of a social network and labor market opportunities, which made youth more vulnerable to sexual exploitation (Acharya & Clark, 2021; Rocha-Jimenez, 2017). In India, prostitution was one of the few viable options for females to provide a family income as a result of a normalization of sex trade in the family or environment in combination with poverty (Dalla, 2020; Dalla, 2020; Macias Konstantopoulos, 2013; Silverman, 2007). This is in line with the knowledge that youth living in poor environments are especially vulnerable for sexual exploitation and that low income non-Western countries report much higher numbers of youth victims (United Nations Office on Drugs and Crime, 2020). This also endorses the need of a cross-cultural perspective on risk and protective factors for sexual exploitation, as the extent to which factors are common and contribute to vulnerabilities may differ between continents. Another difference between continents was that some risk factors were only cited in non-Western continents (e.g. terrorism; child marriage or pregnancy; AIDS) and others only in North-America (e.g. child welfare involvement, intellectual disabilities, mental health problems). This may reflect that the prioritization of research topics differs between continents. For example, intellectual disabilities are present in youth worldwide, but have only been studied in the United States as a risk factor for sexual exploitation. On the contrary, risks such as AIDS that are only studied in Africa, may not be relevant cross-culturally. In order to fully understand such geographical differences, an important next step for future research is to gain more insight into the broader range of possible risk and protective factors for sexual exploitation worldwide.

Finally, results indicate that male youth are underrepresented in the literature on risk and protective factors for sexual exploitation. This while a systematic review by Moynihan et al. (2018) showed that sexual exploitation is a global issue in male youth, in both high and low income countries. The fact that the stereotype victim of sexual exploitation tends to be female is worrying. Especially given that the present findings demonstrate that there are both studies that found a higher likelihood for sexual exploitation in females and studies that found a higher likelihood for sexual exploitation in males. There are still blind spots when it comes to the role of gender in risk and protective factors for sexual exploitation. This is in line with the systematic review on vulnerabilities for sexual exploitation of Franchino-Olsen (2019) and prevent any definitive statements about the risks tied to gender in this review. However we did find some indications that gender may predispose males to encounter some risk factors more frequently than females. For example, running away, experiencing violence in the community and substance abuse were risk factors in both genders, but male youth had higher odds to experience these risk factors (Franchino-Olsen et al, 2021; Panlilio et al., 2019). Gender may indirectly contribute to the association between certain risk and protective factors and sexual exploitation. The same might be the case with LGBTQ+ youth, youth with intellectual disabilities and youth from ethnic minorities, who may have a predisposition to encounter risks such as homelessness or engagement in survival sex more often (Fedina et al., 2019b; Franchino-Olsen et al., 2019). More consideration should be given to these diverse and marginalized populations and their possible additional vulnerabilities. Only then prevention and timely treatment efforts can be tailored to the unique needs of the heterogeneous population of sexually exploited youth.

Strengths and limitations

Research on risk and protective factors for sexual exploitation in male and female youth is still limited. This study is a unique contribution to the understanding of vulnerabilities for sexual exploitation because it adds a cross-cultural perspective. Also, to date there was no overview of protective factors associated with sexual exploitation. The present review underlines the importance and relevance of a strengths-based perspective in youth care and contributes to clarifying prevention efforts and timely treatment for sexual exploitation from a cross-cultural perspective. Additionally, the overview of risk and protective factors is not just an enumeration of the wide range of factors. By categorizing them based on a theoretically based a priori framework, it was possible gain an better understanding of the possible cumulation of common risk factors. Even though we found that such theoretical frameworks are not yet exhaustive with regard to a world wide perspective and protective factors, we were able to make recommendations on what is needed to fill these knowledge gaps. Another strength was that the methodology of this systematic review was accurate and structured. This was reflected in the strong

inter-rater reliability, the followed PRISMA guidelines and the quality appraisal of the included studies, which is not common in research on sexual exploitation.

Several limitations have to be considered. Sexually exploited youth are a heterogeneous group and no single risk factor can determine youth's vulnerability (Choi, 2015). As this review did not address the relationships between factors that were cited in the included studies, no definitive statements on interconnectedness could be made. Future research will generate more knowledge about the interconnectedness between risk and protective factors. Also only peer reviewed articles were included, while there may be grey literature (e.g. policy documents or reports from organizations such as the United Nations and ECPAT International which study and combat sexual exploitation) that contribute to a fuller picture of risk and protective factors worldwide. Regardless of these limitations and the fact that knowledge gaps still exist, this systematic review is unique in presenting a broader overview of both risk and protective factors for sexual exploitation. This is an important first step towards a better understanding of vulnerabilities in youth worldwide.

Table 3. Clinical implications for practice, policy and research

Practice	<ul style="list-style-type: none"> • Increase awareness and knowledge among professionals working with vulnerable children and youth about risk and protective factors for sexual exploitation in male and female youth. • Early interventions in vulnerable children and youth and their families to intercept the often present negative cycle of adversity are urgently needed. • Enhance social networks of children and youth.
Policy	<ul style="list-style-type: none"> • Structurally address the issue of poverty and social inequalities to enhance economic opportunities in all levels of society. • Strengthen policies around vulnerable youth by investing in positive and supportive relationships.
Research	<ul style="list-style-type: none"> • Investigate protective factors for sexual exploitation and their interaction with risk factors to gain a better understanding of pathways into victimization. • Include male youth in research to gain a better understanding of their specific vulnerabilities and possible gender differences. • Gain more insight into sexual exploitation worldwide to be able to match the needs of culturally diverse populations. • Focus on diverse and marginalized populations to be able to match practice and policy to everyone's unique needs.

Conclusions and next steps

Sexual exploitation is an important growing concern in youth to proactively address, as they are at elevated risk to become victims. This systematic review makes a unique contribution to the understanding of vulnerabilities in youth by providing a first overview of both risk and protective factors from a cross-cultural perspective. A deeper understanding of the broader range of risk and protective

factors for sexual exploitation in female and male youth worldwide will enhance our understanding of the different pathways to sexual exploitation, the important role of protective factors and identification of areas where prevention efforts and (early) treatment should be targeted.

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Chapter 3

Sexual exploitation of young men: Background characteristics and needs from a life course perspective

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Abstract

Background

Sexually exploited young men are prevalent, yet underrepresented in clinical practice, policy and research. There are multiple barriers that often prevent young men to disclose and to seek or receive support, such as gender norms, limited awareness of victimization and feelings of guilt and shame.

Objective: By gaining more insight into the background characteristics of young men who experienced sexual exploitation and their needs, this study aims to raise awareness and to better inform policymakers, care- and educational professionals on adequate prevention and intervention efforts.

Methods

Twenty-six young men (age 14-32) who experienced sexual exploitation or other forms of sexual violence in their youth or were at high-risk, participated in this qualitative study that was conducted in The Netherlands. By means of semi-structured interviews and case-file analyses, data was collected to identify risk and protective factors in their life-course and support needs.

Results

Several vulnerabilities (e.g. previous experiences of abuse and neglect, household dysfunction, social rejection, running away, substance use) and a lack of positive and supportive relationships led young men into high-risk situations. Among these were involvement in pay dates, criminality and having to survive from day to day, which contributed to victimization. Prevailing gender norms and experiences of stigmatization were often a barrier to express vulnerabilities and to disclose victimization. There was a wide variety in support needs, including peer-to-peer support, therapy, support with day-to-day practices and anonymous support.

Conclusions

These results will contribute to adequate prevention and trauma-informed intervention strategies that meet the unique needs of young men at risk for, or victim of sexual exploitation.

Introduction

Sexual exploitation is a human rights violation that has a detrimental impact on the psychological, physical and social well-being of victims (Mitchell et al., 2017; Moynihan et al., 2018). It is a form of human trafficking and defined by the 'Protocol to Prevent, Suppress and Punish Trafficking in Persons Especially Women and Children, supplementing the UN Convention against Transnational Organized Crime', commonly known as 'Palermo Protocol' (Office of the United Nations High Commissioner for Human Rights, 2000). The protocol provides a globally accepted definition of the components of human trafficking: 'act', 'means' and 'purpose'. The 'act' component is met when a trafficker recruits, transports, transfers, harbours or receives another person. 'Means' refers to the use of force, threat, fraud, abduction, the abuse of power or other forms of coercion. The exploitation is the 'purpose' component. The current study focuses on sexual exploitation, a specific form of human trafficking (therefore hereafter using the term sexual exploitation). According to the protocol this involves the use of force, threat, fraud, abduction, the abuse of power or coercion to control and exploit individuals for purposes of prostitution or other sexual acts (Office of the United Nations High Commissioner for Human Rights, 2000). This definition applies to children differently. In the protocol the 'means' component is irrelevant for minors: any child under the age of 18 that is recruited, transported, transferred or harboured for the purpose of exploitation falls under the definition of human trafficking. The Palermo Protocol is recognized worldwide to operationalize sexual exploitation. Yet, there are still differences in national, legal and governmental terminologies which results in challenges for policy development, legislation development and research (Interagency Working Group on Sexual Exploitation of Children, 2016; Mitchell et al., 2017). This creates difficulties for interpreting and comparing research findings (Mitchell et al., 2017). Some researchers for example use broader terminology than others when discussing the nature of commercial sex acts. The current study uses the operationalization of the 'Palermo protocol' to identify sexually exploited young men. With 'young men' we mean adolescents from 12 years of age and young adults up to their early thirties, who identify as men. In line with the protocol, force, threat, fraud, abduction, the abuse of power or coercion did not have to be present in young men who are minors in order to speak about sexual exploitation. This study is conducted in The Netherlands, a European country generally considered to be a wealthy and high-income country (World Bank Group, s.d.).

Every young person, regardless of gender, sexual-, cultural-, social-, ethnic- or religious background, can become a victim of sexual exploitation (Hill & Diaz, 2021). Although sexually exploited young men are prevalent, they are unrecognized and underrepresented in practice (e.g. care, education and law enforcement), policy and research (Hill & Diaz, 2021; Josenhans et al., 2020; Mercera et al., 2023; Mitchell et al., 2017). According to prevalence data from school population studies, less than 5% of the young men self-reported that they had experienced sexual exploitation (Moynihan et al., 2018;

Moss et al., 2023). This proportion was higher according to survey studies in vulnerable populations, such as transgender youth (10%) and street connected young men (26%; Moss et al., 2023). Prevalence estimates based on self-report questionnaires and surveys should be taken with caution, due to a high likelihood of under-reporting. Also comparisons between prevalences should be taking into caution, given the diversity in samples, differences in operationalisations, the inclusion of a limited number of countries in the world and the fact that they rely on accessible populations (Moynihan et al., 2018).

Multiple barriers contribute to the underreporting of sexual exploitation, regardless of gender or gender identity. These barriers include the hidden nature of the crime, the hardship for victims to recognize victimization and the large threshold to disclose victimization, for example because of fear for being blamed, being disbelieved, criminal offences, dependency on the perpetrator or shame and self-blame (Andretta et al., 2016; Covers et al., 2022; De Vries et al., 2020; O'Brien & Wen Li, 2020). Additional barriers have been found for young men in particular. Research has shown that dominant gender norms and taboos resulted in feelings of shame, guilt and self-blame (Alaggia, 2005; Josenhans et al., 2020; Ricardo & Barker, 2008) or not seeing themselves as victims (Edinburgh et al., 2015; Hounmenou, 2017). This prevents young men from disclosing and seeking or receiving support (Josenhans et al., 2020). Based on such gender norms professionals tend to view young men as less vulnerable than cisgender young women (Hill & Diaz, 2021; McNaughton Nicholls et al., 2014). Relatedly, young men are frequently first identified by services for acting-out behaviors, and thus seen as criminal offenders rather than recognized as victims who might need help (Josenhans et al., 2020). What further hampers the identification and treatment of this vulnerable group of young men, is a worldwide lack of evidence-based screening tools, specialized prevention and care programs, and training for professionals to identify and treat sexually exploited young men (Greenbaum, 2014).

Actual research on sexual exploitation in young men has shown that a wide range of individual, family and environmental risk factors is associated with sexual exploitation (Moss et al., 2023). At the individual level, victims are known to frequently be underaged and appear to be sexually active at a relatively young age (ECPAT International, 2021; Moss et al., 2023; Simons et al., 2021). A low-risk awareness and being easily influenced or manipulated (e.g. as a result of psychological problems or intellectual disabilities) are seen as important risk factors (Cockbain et al., 2017; McNaughton Nicholls et al., 2014; Reid & Piquero, 2016). Moreover, sexually exploited young men showed conduct problems and criminal involvement more often than non-exploited peers (Moynihan et al., 2018). A lack of resources is associated with sexual exploitation in young men as well. A consistent finding in multiple studies was that being homeless or street-connected was an important risk factor for sexual exploitation (Josenhans et al., 2020). In a study on human trafficking among homeless youth, Schilling et al. (2018) found that many were offered money for sex on their first night of experiencing homelessness. Young men surviving from day to day due to a lack of housing, a support network,

financial resources, or substance dependencies more often seem to engage in sexual exchanges for money, food or shelter and be exploited (Josenhans et al., 2020).

A systematic review on risk and protective factors for sexual exploitation in youth showed that the most common family and environmental risk factors associated with sexual exploitation in young men are experiences of physical/emotional abuse and neglect, sexual abuse, compromised parenting, household dysfunction and economic vulnerabilities (Mercera et al., 2023). These risk factors correspond to the construct of adverse childhood experiences (ACEs), which are potentially traumatic events increasing the likelihood of negative psychosocial and physical health outcomes across the lifespan (Petruccelli et al., 2019). Originally, ACEs encompass experiences of physical and emotional abuse and neglect, sexual abuse or household dysfunction; Felitti et al., 2019). Later, other experiences that relate more to the environment were recommended to include in the ACE concept as well, such as peer victimization, social rejection, poverty, growing up in unsafe communities, out of home placements and experiencing violence outside the family (Affi et al., 2020). Especially the ACE sexual abuse is found to be an important risk factor for sexual exploitation in young men (Ahrens et al., 2012; Josenhans et al., 2020; Silverman et al., 2022). It increases the likelihood of recurring patterns of sexual violence, which are rather common in young men who are sexually exploited. (Simons et al., 2021).

Cultural risk factors include young men's migration background and certain cultures' traditional ideas about masculinity and homosexuality (ECPAT International, 2021). Moreover, although evidence is scarce, a relatively high exposure to sexual exploitation has been demonstrated in LGBTQ youth (Greeson et al., 2019; Hogan & Roe-Sepowitz, 2020; Josenhans et al., 2020). Two Dutch studies provided more insight into possible underlying reasons (Van Gelder et al., 2017; Van Went & Castelijns, 2018): young men who grow up in a social or cultural context where gender diversity or sexuality is less accepted, have been found to explore their sexuality more often in secret and online environments where supervision is limited and there is a risk for grooming. Moreover, family rejection frequently resulted in homelessness, which is a risk for sexual exploitation.

Although underexamined, protective and compensatory experiences (protective factors that can mitigate the effect of ACEs) play an important role in reducing the likelihood of sexual exploitation (Crandall et al., 2019; Hays-Grudo et al., 2021; Landers et al., 2020; Mercera et al., 2023). Several studies on sexual exploitation indicated that young men who grew up with biological parents and experienced parental support and involvement, were less often sexually exploited than peers without these protective factors (Cluver et al., 2020; Franchino-Olsen et al., 2021). In addition, Reid and Piquero (2014) demonstrated that completing school reduces the likelihood of sexual exploitation in both young men and women.

A more comprehensive understanding of the factors that play a role in the likelihood of sexual exploitation in young men and their care and support needs is required to address knowledge gaps. In

their systematic review, Moynihan et al. (2018) recommend future research to address care and support needs of this population. Then, prevention and intervention efforts can be better accommodated to their unique needs. The use of more qualitative designs is recommended to integrate the time span of the life-course and the voice of young men themselves (Cockbain et al., 2017; Moynihan et al., 2018; Selvius et al., 2018). Therefore, the present qualitative study aimed to gain insight into background characteristics and care and support needs of young men who experienced sexual exploitation or other forms of sexual violence from a life course perspective. Actual victims of sexual exploitation and victims of other forms of sexual violence (e.g. sexual abuse and rape), as well as young men at-risk were included to gain a better understanding of critical life points that may prevent or contribute to sexual exploitation. Possible differences and commonalities between subgroups were explored.

Methods

This qualitative study was a collaboration within a consortium, existing of five organizations in The Netherlands. All organizations provide care and support to youth and young adults who experienced sexual exploitation or other forms of sexual violence. This study was approved by the medical ethics review committee (METC) of Maastricht UMC+ and Maastricht University (METC 2020-2295).

Participants

Participants were recruited within the five involved organizations, through other collaborative organizations, the professional network of the researchers and via peer-support platforms. The following inclusion criteria were used: 1. adolescents and young adults unto their early thirties who identify as men; 2. experiences of sexual exploitation or other forms of sexual violence in their youth (before age 23); participants that were identified by care professionals as 'high-risk' for victimization of sexual exploitation or other forms of sexual violence; 3. willingness to participate by interview or by making their clinical records available for research.

For the operationalization of sexual exploitation, the Palermo protocol was used as outlined in the introduction (Office of the United Nations High Commissioner for Human Rights, 2000). For participants who were victims under the age of 18, the component 'means' was irrelevant to speak of sexual exploitation. In the context of this study, the exploitation component that was present in the experiences of sexually exploited participants, set them apart from participants who experienced other forms of sexual violence (Interagency Working Group on Sexual Exploitation of Children, 2016). Other forms of sexual violence included rape, sexual abuse and sexual assault (United Nations, 2017). High-risk participants were identified by professionals as 'high risk' during their youth (before 23 years old) and elevated vulnerability concerns. Concerns were based on (sexual) risky situations (e.g. having been

in contact with sex offenders or human traffickers without being victimized, having witnessed peers being recruited for exploitation, having risky sexual encounters characterized by a power differential. To ensure their safety, participants with unsafe living environments or at risk of negative consequences when talking about their life courses were excluded. This was explicitly discussed with the participants during the informed consent procedure and with an involved professional in case they received care. Ultimately, in none of the participants was this not the case for any of the participants, allowing the participation of all participants that the organizations connected the researchers with.

Procedure

In the set-up of this study, the researchers cooperated with an advisory board of professionals working at the five organizations of the consortium in the field of policy, research and practice. Aim of this board was to monitor the process and to ensure objectivity, clinical relevance and safety of the participants. The board, for example, ensured that relevant topics were included in the interview guide, that questions were formulated in a trauma-informed manner and advised researchers on how to approach participants.

Organizations were approached by the researchers with the study information and inclusion criteria and were asked if they had potential participants in their case load. If that was the case, the involved professional informed the potential participant about the research. The researchers contacted the potential participant when: 1) the participant expressed interest in participation and 2) gave permission to their professional to provide contact information to the researchers. The researchers contacted these potential participants to inform them about the study aims, procedure, expectations, privacy, data processing and study output. All participants gave written informed consent following this procedure. For participants under the age of 18, parents also gave consent. Three researchers of the consortium conducted the interviews and the clinical record analysis. In no case did they have an existing professional relationship with any of the participants. The analysis of the clinical records took place via access to the electronic patient database without further involvement of the participants. Interviews were conducted in person at a location familiar to the participants, with the exception of three interviews being held via video call due to practical considerations (e.g. distance or participant preference). Arrangements were made about where and to whom they could turn during or after the interview if negative feelings would arise. The informed consent letter explicitly stated that with participants' consent the interview audio would be recorded for the purpose of transcription. At the start, the researcher explained the interview structure and introduced the interview topics. Although there were five main topics, the researchers let the participants control the direction and pace of the interview within these five main topics (see the next paragraph). This resulted in a variation of interview duration between 40 minutes and 2.5 hours. The participants received a monetary voucher of 15 euros

for their time and effort. The researcher travelled to the participants, so the participants had no travel expenses.

Measures

Qualitative data were collected through individual semi-structured interviews and clinical record analysis. Interviews were conducted using an interview guide. Participants' life stories, experiences, feelings, behavior and critical points in their lives were collected. The interview guide consisted of several topics and was developed by consulting the literature on sexual exploitation in young men and the work of Bodden and Dekovic (2010) and Dekovic and Bodden (2019) on factors that characterize children and families with multiple and complex problems. For the interview script, the research design of the Dutch study 'Ketenbreed Leren' was consulted with approval of the authors (Spijk-de Jonge et al., 2022). The topics of the semi-structured interview included: family context, social network, school and work, relationships and sexuality, history of health care and support needs. Narrative interview techniques were used for the initial exploration of a main topic (e.g. 'Can you tell me what your family looked like when you grew up?'). These open-ended questions were meant to invite the participant to share experiences relevant to him within that topic. The participant controlled the direction, meaning that he decided what experiences were important to share and how much he was willing to share in relation to the discussed topic. The researcher had an interested and non-directive attitude and asked probing questions to explore the shared experiences in depth (e.g. 'can you name an example?', 'what were positive/negative experiences?', 'how did that affect you?'). For each topic, the topic list contained some questions that were asked, if the participant had not already addressed these subtopics himself (e.g. how was your relationship with your parents?; did anything unpleasant ever happened at home?). The experiences were linked to the participant's age, to be able to put them chronologically in time. If desired, the lifeline of the participant was drawn on a sheet of paper, using post-its and markers to visualize the experiences. The clinical records contained reports from former and current (youth) care, diagnostics, treatment, and education. The information in the reports was anonymized and analyzed with the topics from the interview guide as a codebook. New themes could emerge and were added to the codebook.

Data analysis

The data consisted of the anonymized transcripts of the interviews and the clinical records. Clinical records concerned indirect information about the life course and support needs of the participants to describe background characteristics. In the present analysis a distinction is made between the three subgroups of participants, as to date data on sexually exploited young men is still sparse (Kavenagh et

al., 2023) and because of the potential value of these specific data for targeted prevention and treatment strategies on sexual exploitation and other forms of sexual violence (Interagency Working Group on Sexual Exploitation of Children, 2016). Interview data were coded through open, axial and selective coding, structuring the data into themes using thematic analysis (Baarda et al., 2013). The software program Atlas.ti (version 9) was used to code and analyse the data. A social constructionist approach to grounded theory was used to analyze the data (Charmaz, 2006). In order to deal with personal subjectivity due to researchers' own experiences, a reflective, interpretative approach was conducted throughout the analysis process. Therefore, researchers repeatedly reflected on the data, their own coding and each other's coding through mutual discussion. Three transcripts were coded by two different researchers after which these researchers reviewed each other's coded transcripts. Coding discrepancies among the researchers were resolved through mutual discussion, initial codes were revised and new codes were created. By this process, an initial coding scheme developed. The researchers continued coding their own assigned transcripts following this coding scheme. During regular project staff meetings, the researchers reviewed and discussed each other's coding repeatedly to gain deeper insights into overarching themes within participants' life courses. The open and axial coding was done using an inductive approach, in which the constructs (themes) were determined by the data, emphasizing the importance of the participants' narratives of their experiences (Charmaz, 2006). Then, the main researcher used selective coding with a deductive approach to organize and structure the data by existing theoretical knowledge. For this purpose, the Intergenerational and Cumulative Adverse and Resilient Experiences (ICARE) model was used (Hays-Grudo et al., 2021). This model provides an integrative synthesis of ACEs, protective and compensatory experiences (PACEs) and environmental stressors on various life outcomes regarding development, (risky) behavior and social, mental and physical health problems. The resulting code tree, with associated themes, subthemes and quotes was discussed and finalized with a second researcher. The codebook resulting from the analysis of the interviews was then applied to the clinical records. Ultimately, four main themes emerged from the interviews and clinical records. The underlying code tree and quotes were used to describe the results. Quotes were translated from Dutch to English by the researchers.

Results

Twenty-six participants were included, of which twenty-one agreed to be interviewed and five made their clinical record available. Table 1 demonstrates the demographic information of the participants. Eleven sexually exploited participants were included, seven participants who experienced other forms of sexual violence and eight participants at high-risk. Four overarching themes emerged which were chronologically structured by the ICARE model in accordance with participant's life courses: Participants shared that ACEs and a lack of protective and compensatory experiences (theme 1)

impacted their emotions, coping and risky behavior in childhood and adolescence (theme 2) and how this contributed to victimization of sexual exploitation, other forms of sexual violence or to high-risk situations (theme 3). Additionally, participants shared barriers they experienced in access to and during (health) care and their care and support needs (theme 4). The main themes, underlying subthemes and differences and commonalities between subgroups are described below.

Table 1. Basic demographics of the participants

Participant code	Age during interview	Gender identity	Categorization
R1	18	Transgender*	High-risk
R2	25	Cisgender man	Sexual exploitation
R3	18	Cisgender man	High-risk
R4	20	Cisgender man	Sexual violence
R5	22	Cisgender man	High-risk
R6	19	Cisgender man	High-risk
R7	24	Cisgender man	Sexual violence
R8	15	Cisgender man	Sexual violence
R9	32	Cisgender man	Sexual violence
R10	17	Cisgender man	Sexual exploitation
R11	22	Cisgender man	Sexual exploitation
R12	27	Transgender**	Sexual exploitation
R13	20	Cisgender man	Sexual exploitation
R14	20	Cisgender man	Sexual exploitation
R15	14	Cisgender man	High-risk
R16	17	Cisgender man	Sexual violence
R17	23	Cisgender man	Sexual exploitation
R18	19	Non-binary***	Sexual violence
R19	17	Cisgender man	High-risk
R20	20	Cisgender man	High-risk
R21	16	Cisgender man	High-risk
R22	24	Cisgender man	Sexual exploitation
R23	25	Cisgender man	Sexual exploitation
R24	18	Cisgender man	Sexual exploitation
R25	27	Cisgender man	Sexual exploitation
R26	24	Cisgender man	Sexual violence

* Participant born as male and identified as a woman in late adolescence. Shared life story from the perspective of both gender identities and therefore included.

** Participant born as female. He identified himself as man and completed his transition.

*** Participant who identified as a man when he experienced sexual violence and identified as non-binary during the interview.

Adverse Childhood Experiences

ACEs were a major theme in the interviews and clinical records. All participants, independent of their subgroups, experienced at least one ACE. These experiences were categorized in two subthemes: 1.

ACEs in the home environment, including physical/emotional abuse and neglect, sexual abuse, domestic violence, parental separation and parental mental health problems or parental substance abuse; 2. experiences of social rejection, including being bullied or excluded by peers.

Adverse childhood experiences in the home environment. Approximately three quarter of the participants experienced ACEs in the home environment. Participants for example witnessed violence between parents, did not feel taken care of or supported by their parents and/or were beaten or scolded. Parents themselves were struggling with problems, such as depression, Post Traumatic Stress Disorder (PTSD) or substance dependence. Often there was an accumulation of family problems:

'I have a mother and three brothers of whom one was placed out of home at that time. The other two stayed at home. I had an alcoholic stepfather who abused me. My own father who abused me at home. [...] Yeah, what did my childhood look like? Yes, difficult to explain. Messy.' - R5

A quarter of the participants experienced sexual abuse in childhood. Three of them were revictimized in later life by sexual exploitation or other forms of sexual violence. Awareness of the abuse often did not come until later in life. Participants explained they had suppressed the experience, they thought it was normal or they thought it was their fault.

'When something like this happens, you have to imagine your body reacts too, so then it's easy to blame yourself. Since my body is reacting, I wanted it. But that's not the case at all.' - R9

Participants often did not disclose these adversities. They explained that they were used to violence at home, did not (want to) feel like a victim or did not want to bother others with their problems. Participants who experienced an accumulation of ACEs in the home environment (half of the participants) often lacked protective and compensatory experiences, such as being able to fall back on their parents or families for support.

'And then it happened [the rape], and after that I just ran away. I just carried on as if nothing was wrong. Ideally, I would have had parents I could tell that this happened.' - R18

Experiences of Social rejection. Experiences of social rejection was a second subtheme regarding ACEs. More than half of the participants had been bullied, were rejected or felt like an outcast (e.g. due to gender identity or sexual orientation, being raised by people other than their parents, or their behavior such as hyperactivity and difficulties to connect with peers). LGBTQ+ participants shared that their coming-out was a difficult phase. Exploring their (sexual) identity and coping with negative reactions and judgments was challenging:

'It's not that they [parents] don't accept me for who I am, but they are very afraid of the reactions from the world outside.' - R7

Moreover, participants with behavioral problems often experienced stigmatization. They explained that their social environment mainly looked at their problems instead of them as an individual. Hence, they felt rejected, as the following quote illustrates:

'You are the child who is placed out of home because you are a problematic child. That gives you the impression that there is something wrong with you.' - R4

Protective and compensatory experiences. Although limited compared to ACEs, participants reported on protective and compensatory experiences as well, such as parental support, support from friends and positive school experiences or leisure activities. In participants who did not experience an accumulation of ACEs, parents were more often a protective factor and had a supportive role.

'Whether it's stealing, drugs, or talking about sex, I tell my parents everything. Even if they don't always want to hear it. Because I know that my parents can give me the best advice. They can really talk to me about it [...]. They judge [my behavior], but can also help me.' - R17

As can be expected from our inclusion criteria, protective and compensatory experiences did not prevent participants from being in situations of sexual exploitation, other forms of sexual violence or high-risk situations. Yet, for many participants these experiences did help them to deal with challenges in their life-course and to feel like they have a future perspective again. In the case of participant R17, for example, parental support helped him to disclose his negative sexual experiences to his parents, after which he sought treatment to process this. Another participant who is a drag performer, experienced social rejection and stigma in adolescence. His leisure activity, joining theatre, helped him to express himself and to meet people that made him feel understood.

'And then I got involved in theatre, which I really enjoyed. In society and especially in school, you have hierarchies or something. You have the popular people, you have the people who are less social. In theatre it's all the same. I thought that was a nice development.' – R7

In summary, this paragraph showed that a large proportion of the participants experienced ACEs and a lack of protective and compensatory experiences. They had missed sufficient stability, support, attention, and recognition in their childhood. They explained that ACEs highly affected them and made them increasingly vulnerable for developing problems in later life, which contributed to high-risk situations and experiences with sexual exploitation and other forms of sexual violence, which is further described in the following paragraphs:

'So that's where [youth] it started. Because I lived everywhere and I was being raised by social services, I never really had stability with people around me and no permanent place to stay. That caused my addiction, looking for excitement and sex work. Because sex work is also acceptance. The fact that those people come to you can mean something. A kind of fake love of course.' - R24

'Experiences in your life and the people around you have a very big influence on the choices you make. They shape you. That's why it's important that a child is raised well, isn't it?' - R26

Emotions, coping and risky behavior

Theme 2 encompassed emotional and behavioral problems in childhood and adolescence. Subsequently, unhealthy coping mechanisms and risky behaviors paved the way for involvement in high-risk situations which increased the likelihood of victimization of sexual exploitation and other forms of sexual violence. As with theme 1, theme 2 revealed no differences between subgroups.

Internalizing and externalizing behavioral problems. Three-quarters of the participants talked about emotional and behavioral problems in childhood and adolescence. Half of them experienced internalizing problems, such as identity problems, low self-esteem, loneliness, depression, and suicidal behavior. Many participants linked these problems to ACEs or complex family situations. Identity problems were especially prevalent among LGBTQ+ participants, who all had struggled with their sexual orientation, gender identification and coming-out.

'I was very tired of life because I no longer knew who I was. I thought that nobody cared about me or anything. Everybody else had somebody and I had nobody.' - R1

For most participants, internalizing problems remained invisible for the people around them because they did not talk about their feelings. Some of them compensated for their negative feelings with unhealthy coping strategies such as drug and alcohol use. The other half of participants with emotional and behavioral problems experienced externalizing problems, such as aggression and conduct problems. All of them were involved in (residential) youth care and/or special education since childhood and had experienced an accumulation of ACEs. Many of them linked their behavioral problems to past experiences.

'It [aggression problems] arose out of trauma, because as a child you experience things. And unconsciously you start to develop problems and adopt certain habits. [You] find things normal, that are actually not normal at all.' - R4

Instead of expressing their underlying feelings, their behavior was more prominent:

'I never really cried when things went shitty [at home], but I was always angry.' - R10

Externalizing problems often evoked negative reactions from the social environment, such as being rejected and having arguments. This in turn resulted in additional problems such as parent-child relationship problems, school problems and out-of-home placements.

'In high school things went downhill. That's when my parents divorced. That did have an impact on me [...]. I started bullshitting in class, breaking things, came into contact with police. [...]. I was also placed out of home because of drug use and stuff.' – R6

Coping and high-risk behavior. Participants showed some tendency to engage in risky behaviors. This meant they were at higher risk of adult perpetrators making contact with and exploiting them. Over half of the participants reported excessive alcohol and drug use, nearly half of them reported risky sexual behavior and a third ran away and/or were involved in criminal activities. Three functions of high-risk behavior could be distinguished: 1. As a coping mechanism; 2. For the purpose of experimenting; 3. As a result of group influence.

First, three quarter of the participants described risky behavior as a coping mechanism to deal with negative emotions and environmental stressors. Substance use was mentioned most often. Participants indicated that drugs helped them to numb their feelings.

'Especially when you're in such a shitty situation at home. That's when you start smoking [weed] and drink.' - R13

LGBTQ+ participants described risky sexual behavior as a coping mechanism, including dating strangers and having multiple partners. Due to a lack of love and affection or as a way to make up for unpleasant past sexual experiences, they deliberately looked for boundaries when it came to their sexual behavior. Furthermore, participants who showed multiple types of risky behaviors, more often had substance dependencies, financial problems and unstable living situations. This particularly concerned participants with poor relationships with parents, multiple ACEs and externalizing behavioral problems. They often went from institution to institution, dropped out of school and explained they were 'surviving':

I had to survive. I came from a closed group home. I had no one around me, no mother, no father, no one. When I got out, my little brother didn't want to have contact with me either [...]. I did everything to survive.' - R3

This survival behavior arose from circumstances in their lives that they did not choose for themselves. It did increase their dependency on substances and/or other people who could provide them money

or shelter. Hence, several participants felt no other way out than engagement in criminal activities or sex work to generate income. This put them into vulnerable positions, of which human traffickers and perpetrators of other forms of sexual violence took advantage.

Second, risky behavior was described as a way to experiment, particularly risky sexual behavior to discover one's sexual orientation and gender identity. Sexting, sex dates with strangers and paydates, were ways to explore sexuality. Often their social environment was not aware of this, especially in LGBTQ+ participants who were in their coming-out phase or who experienced acceptance problems. Lastly, group influence was reported as a reason for risky behavior. In their social environment, alcohol and drug use was normalized, as well as hanging out on the streets and conducting petty crimes. Group norms especially contributed to risky behavior in institutionalized participants:

'Many youth [in the institution] were in contact with police, and had a weakness for listening to people they shouldn't listen to [...]. That's kind of compelling and stuff.' - R5

Risky sexual and transgressive behavior was prominent among participants who functioned at the level of mild intellectual disabilities to borderline intellectual functioning. According to their clinical records, what contributed to this was a combination of cognitive, adaptive and social-emotional delays, comorbid psychiatric disorders and subsequent difficulties in overseeing dangerous situations and impulsive behavior.

Sexual exploitation and other forms of sexual violence

The previous two themes showed parallels in the lives of the subgroups regarding ACEs and challenges in emotions, coping and (risky) behavior. This third theme explains different pathways, namely how victimization of sexual exploitation and other forms of sexual violence emerged, and in the case of high-risk participants, what factors were present that may have prevented victimization.

Sexual exploitation. Two pathways to sexual exploitation were found, which could partially overlap: 1. Young men surviving from day to day, as a result of a lack of financial resources, shelter, a supportive network or substance dependencies; 2. Young men engaged in pay dates and sex work. Participants who were surviving from day to day commonly reported difficult or no contact with parents, substance use, criminal activities, dropping out of school, multiple out-of-home placements, residential instability, financial problems and runaway behavior. Human traffickers took advantage of their vulnerable positions by giving them shelter, money or the attention and affection lacking in their lives:

'Just literally a man offering youth money for sexual acts. And who knows about vulnerable young men, who knows you're homeless, who knows you have no money and you have no food.' - R5

In half of these participants, the exploitative situation started by carrying out criminal activities for the trafficker. Consecutively, they were manipulated, forced into sexual activities and/or or in recruiting others to be exploited.

'Well I owed them 15.000 euros and then I had to put up a [weed] plantation upstairs. In the beginning I was like well okay let's do it. After two or three weeks I wasn't allowed to leave his house [...]. I didn't know [what to do] anymore. And I said well, if I have to, I'll go after women. Because I didn't know what else to do. Well, I did and he wanted me to keep doing that.' -R2

Several participants knew the trafficker before they were exploited. They were a friend of the family, a neighbour or a cousin, which caused loyalty conflicts or normalization of being part of the trafficking network.

'In the end, it's very hard to explain, but that person becomes like a friend of yours or something [...]. In the end, we also brought people there, with whom the same thing would happen.' – R13

Participants who were victimized by engagement in pay dates and sex work, were often LGBTQ+ participants in young adulthood. Sex work was a way for them to experiment with their sexuality. Some participants indicated they liked the attention and the feeling of belonging, which they had missed in their lives. Some participants experimented in secret, due to acceptance problems of their gender identity or sexual orientation in their environment. This pathway partially overlapped with participants surviving from day to day, as pay dates could be a way to obtain money.

'I found it very exciting, I didn't know very much about it. I thought it was easy, making money. And then I belonged somewhere. I also saw other children of my age who were there. Then I thought, I'm not the only one, so it's not so strange what I'm doing.' -R24

During the interview the same participant (R24) mentioned that he now looks back on this differently. As a child he did not realize it was an exploitative situation, which was true for other participants as well. Via sex work they came in contact with a pimp who turned out to be a human trafficker. Human traffickers promised them clients and money, but turned out to be taking control through manipulation, coercion and by raping them. For many participants it was difficult to get out of the situation. This was due to coercion, manipulation and violence, but some participants also normalized the situation as they had gotten used to violence:

'When you know too many people in those things [...], making that step to normal is really hard. I try to stay out of it now, but it's not just that man, it's a whole network all over the country. Eventually you automatically belong, become like them, and can't just get out anymore.' - R10

Other forms of sexual violence. Seven participants experienced other forms of sexual violence:

1. half of them were victims of rape or sexual assault during dating; 2. the other half experienced sexual abuse by a person they knew from their own or from family's social network.

The first group mainly concerned participants who were discovering their sexual orientation or gender identity. Gender beliefs in their environment caused that they experienced acceptance problems and wanted to experiment secretly, which overlaps with the pathway of sexually exploited participants who engaged in sex work to experiment with their sexuality. Then they got involved in risky sexual encounters with older men or strangers:

'I was quite depressed at that time and I was also gay. So that was not a helpful combination. I had a dating app, where I met a guy and he said 'oh I'll show you how the gay scene works. Everyone feels lonely that's normal, if you meet nice people then it will all work out.' - R7

The distinction between victimization of sexual exploitation and other forms of sexual violence is thin, as illustrated by the quote below. Both subgroups have similar vulnerabilities and seek sexual contacts by the same means. However, they come in contact with different types of perpetrators:

'Look, I fell into that trap of a guy who was actually married and who was living a double life. And that father figure, that love of a man, because you miss that, you actually get from him. But it could have also been a pimp.' - R26

The other four participants experienced sexual violence by someone they knew, e.g. a stepfather, brother or employee of their father's company. Two of them had experienced sexual abuse as a child as well, and thus experienced revictimization. The participants explained they often did not realize they were victims of sexual abuse, as the perpetrator was someone they knew and trusted.

'When you grow up as a child with parents you have no connection with, that [fact that] you are abused, that was actually the first moment I felt love or closeness with someone, so you get confused.' - R9

Young men at high-risk. Eight participants did not experience sexual exploitation or other forms of sexual violence, but had similar backgrounds as the other two subgroups. Half of them did come in contact with a perpetrator. Two participants explained that they had no place to stay and encountered a man who asked them to engage in sexual acts. One of the participants ran out of the situation and the other one expressed his boundaries after which the man stopped his attempts:

'At 17, I was put on the streets. I started wandering all the time until I was 19. Then I came to [name], [...] who put me with a gay man at a camping. The first night I slept there, he said you should sleep in the same bed. I thought that was weird. And I tried to sleep, and all of a sudden he puts his arm across my belly. I thought, fuck off. I'm not going to participate in that.' – R5

Another participant, with intellectual disabilities, used the internet to meet with worrisome strangers. His care providers were aware and taught him how to make safe and healthy choices. The other half of the participants at high-risk did not experience high-risk sexual situations; other problems were more central. Two participants were involved in dealing drugs and two participants showed sexually transgressive behavior themselves. Although all participants had similar vulnerable backgrounds, there were different life outcomes, such as victimization of sexual exploitation, other forms of sexual violence but also involvement in criminality or other risky behavior.

Perceptions on victimization and the role of gender norms. How victimization was experienced differed between participants. A quarter of them realized to a greater or lesser extent that they were involved in a situation of sexual exploitation or other forms of sexual violence. However, because of coercion, manipulation and dependencies (such as debts or residential instability) they could not escape their situation. Other participants did not realize they were exploited or were in a situation of sexual violence. They thought (sexual) violence was normal, for example because of their histories of violence in childhood, or they thought they had opted for it themselves by choosing for sex work.

'Almost no one in the trial feels like a victim. And that's because everyone is like, we voluntarily chose to do the work ourselves. That sexual assault and rape, we just didn't choose that. And the coercion, we didn't choose that. But the work we did choose voluntarily, so that's why we feel not quite victimized I guess.' - R22

An important finding was that relatively many participants did not want to feel victimized or to be perceived as victims because they saw this as an unwanted vulnerability. Gender norms had a prominent role in this taboo. Participants explained that it is hard to talk about vulnerabilities as a man. They for example did not dare to tell someone about it because they felt ashamed to have experienced sexual exploitation or other forms of sexual violence. Others explained that as men they thought they had to be 'tough'.

'Not many [men] dare to talk about it. I also kept it quiet for a very long time. And it was difficult. And I think there are many more men who have a hard time with that.' - R8

'A lot of guys don't want to be a victim, because then you feel at your most vulnerable [...]. At that moment, you want to be that tough guy right? You have to prove yourself.' – R3

Another participant explained that people do not realize that men can become victims as well.

'I even read books about it, about loverboys, but it was only about girl [victims] and a boy. So everybody gets that perception. – R26

Such gender norms and beliefs resulted in the fact that many participants did not disclose victimization for a long time. Another reason why participants did not disclose victimization was because they had no supportive relationships in their family or social network to open up about it. Others had no confidence in health care professionals or the police, so they did not speak out.

Barriers in health care and care needs

The fourth theme demonstrates the barriers in health care that the participants experienced and their care and support needs. Overall, participants experienced several forms of (health)care and support for different reasons at different timepoints in their lives. It was found that the perceived barriers and care and support needs varied. Three quarter of the participants received professional healthcare during childhood and adolescence prior to victimization (e.g. for behavioral or family problems). Health care varied from outpatient family support and therapy, to open and closed residential placements and juvenile detention. A quarter of the participants received professional health care for the first time after victimization (e.g. trauma treatment, outpatient counselling or practical support). It often took a long time for them before they talked about victimization and received help. Moreover, not all participants wanted help with regard to sexual victimization, but they preferred (practical) support for other challenges in their lives, for example regarding finances or housing.

Barriers. It emerged that many participants experienced care and support as impersonal. They reported that they were not seen as individuals, they were not listened to and experienced little voice over their own lives, especially those who received residential health care. This impersonal treatment reportedly resulted in a lack of confidence in healthcare professionals, little motivation to work on goals and not sharing the adversities they had experienced. Furthermore, the majority noted there was too much focus on diagnoses and problems. Participants experienced that healthcare gave them the feeling of being the problem because of acting-out behaviors, while there were many problems in their (family) environment. This encouraged self-labelling:

'Well, then ODD came out [of diagnostics]. And from that point the trajectory started. With millions of agencies around me. And of course that has partly shaped me, of course, as a child... then you start living by that. You feel limited. - R11

[I was approached] as a perpetrator. As kind of a suspect, that's the feeling you have then. You come in there [an institution] and you feel like you are there for punishment. And then you [behave] just so. – R5

Moreover, they explained that healthcare did not match their needs and the underlying causes of their behavior. For example, drug use was often a coping mechanism for underlying trauma but healthcare contra-indicated addiction for trauma treatment.

'I do understand that I have an addiction, but there are all kinds of things underneath, you know? That's where the help should focus on. Because then they would also have understood why I have an addiction and why I have certain patterns in my behavior.'- R9

For some participants, gender norms were a barrier in health care as well, which prevented them receiving the help they needed.

[With girls, care workers were like] I'd like to help you. And to guys: 'would you like to go away, I'm busy with her right now'. It's just hard to explain. If you are a girl, of 15, you are even more vulnerable than a boy. They think. But you're just as vulnerable. – R3

In addition, installing young men with similar problems in group homes was at the expense of individual needs and encouraged negative peer influence. Some participants felt that the authorities did not believe them once they shared their story, including one participant who was a victim of sexual exploitation to whom the police and justice department dismissed the sexual violence as 'rough sex among homosexual men'.

Finally, many participants who experienced sexual exploitation or other forms of sexual violence experienced a lack of knowledge and education regarding relationships and sexuality, as well as gender identity. They explained that this contributed to their vulnerability because they were unaware of possible dangers and had difficulties recognizing it as victimization:

'Well if I knew for example what I went through was rape, I might have sought help sooner. I thought I just went through something that was shit and that nobody knew. If I knew gender fluidity existed, I would have felt normal a lot sooner. That there are others like me too. [I would have felt] less lonely, yes.'- R18

Care and support needs. A variety of care and support needs emerged from the life stories of the participants. A first major subtheme was that healthcare should be more personal and match individual needs:

'Every person needs a different approach and in youth care that doesn't happen.' - R11

Taking the time to establish trust and a connection was considered an important first step in providing care and support:

'Yes, by really connecting to what really bothers someone you know. And if someone is not yet ready to tell his story, then please don't put all kinds of other things [diagnoses] on him hoping it will help. Just support them and keep up the client's pace. Don't go too fast.' - R9

As the step to therapy was often too big, many participants explained the need for easily accessible care. They mentioned anonymous online chat platforms and peer-to-peer contact groups.

'That it says 'click here if you want to talk' and that it's inconspicuous. Because as a boy, you just don't dare to talk about that.' - R8

Another important need was care that is not based on taboos. These taboos prevented them from expressing their vulnerabilities and disclosing victimization. To address this problem, participants indicated that these topics should be talked about more openly in healthcare, school, and society in general. A number of participants mentioned that media such as influencers and advertising campaigns could play a role in this.

'Because even in health care and school, a student never really talks about sex, only during biology. That it's for the purpose of reproduction. But never about how a child feels about it, or what a child has experienced'. - R24

Therefore, an important need regarding prevention was sex education. Some participants knew the concept of 'loverboys' but were unaware that men were also targeted. Suggested themes for sex education were victimization, (gender)identity, do's and don'ts regarding sexuality and relationships and practical knowledge with regard to money.

'It was my choice, so to speak, to start [sex work], but because I knew very little about it and because I was still a child, you don't really know the dangers of the outside world.' - R24

'I can imagine that for a lot of men it [becoming a victim of sexual violence] is still a women's issue. And [that it is important] to find your masculinity again. Like, I am a man, why did this happen to me?' - R12

Some participants were in need of more parental involvement and support. Healthcare often focused on the participant's problems and less on family problems:

'I think it [healthcare] should have looked at everyone and not have focused on one person. Just have looked at the whole family. In the end they did. But that was too late [...]. In the end I didn't need youth care after all. I just needed more love in the family I think.' - R13

Some participants needed support with practical day-to-day challenges, to get their lives back on track on themes such as housing, school, work and their future focus. Some participants for example needed social work to help them find a job or help dealing with financial responsibilities.

Discussion

This qualitative study provided a more comprehensive understanding of the background characteristics that can play a role in the onset of sexual exploitation and other forms of sexual violence in young men from a life-course perspective. Additionally, we gave insight into the care and support needs of this population. Four main results will be discussed: 1. The background of sexually exploited young men, young men who experienced other forms of sexual violence and young men at high-risk is characterized by an accumulation of risk factors and absence of positive and supportive relationships; 2. Two pathways to sexual exploitation are young men having to survive and young men involved in online dating and pay dates; 3. Gender norms, experiences of taboo and stigma were highly prevalent and created barriers to disclose victimization; 4. Young men who experienced sexual exploitation or other forms of sexual violence have a variety of care and support needs.

First, the background of the participants was characterized by a broad range of early age vulnerabilities at the individual, family and/or environmental level, independent of the subgroup. Especially ACEs were highly present, as well as a lack of protective and compensatory experiences such as parental or social support. This study adds to the existing body of knowledge (Mercera et al., 2023; Moynihan et al., 2018; Reid & Piquero, 2014) on how an accumulation of these risk factors combined with an absence of protective factors contributes to victimization or high-risk situations from the perspective of young men themselves. Participants in the present study explained that ACEs highly affected their lives and often led to emotional and/or behavioral problems. Subsequently, risky and health compromising behavior followed, in order to cope with their complex life situations, accumulating to high-risk situations or actual victimization of sexual exploitation or other forms of sexual violence. These findings enrich the knowledge from the very few quantitative studies regarding pathways of young men into sexual exploitation. For example, Reid and Piquero (2016) found a link between caregiver strain (e.g. caregiver arrests, substance use, relationship problems), poor nurturing, psychosocial problems and risky behavior in young men, of which psychosocial problems and earlier initiation of sexual relationships were significantly related to sexual exploitation. Moreover, Fedina et al. (2019) demonstrated that child abuse, insufficient basic needs and substance use are underlying risk factors for runaway behavior among youth who were involved in the commercial sex industry. Since

factors that could represent traumatic events seem to be central in these pathways, theoretical models that consider complex trauma in this population and its impact are needed (Moss et al., 2023). By analyzing the present results with such a trauma-informed model (ICARE model), we were able to explain that ACEs, a lack of protective and compensatory experiences, subsequent emotional and behavioral problems and successive risky behavior play important roles in these pathways to negative life outcomes, among which sexual exploitation and other forms of sexual violence (Felitti et al., 1998; Hays-Grudo et al., 2021). This is in line with Lalor and McElvaney (2010), who explain that the same underlying accumulation of vulnerabilities (e.g. abuse, disturbed family environments, poor parental attachment, psychological disorders and substance use) can mediate the likelihood of risky sexual behavior and different types of sexual victimization. In order to prevent sexual victimization and/or other negative life outcomes, care and support should focus on reducing risk factors and strengthening protective and compensatory experiences. Early interventions with a family-oriented and trauma-informed approach are important to promote resilience and recovery and to prevent (re)victimization (Hays-Grudo et al., 2021; Moss et al., 2023).

Second, although the participants all had unique life stories with different combinations of risk factors, two pathways to victimization stood out, namely victimization of sexual exploitation through 1. a survival mode; 2. online dating and pay dates. In participants who were in a survival mode, a lack of financial and/or relational basic needs was present, due to the combination of ACEs, parent-child relationship problems, out of home placements, school-dropout, substance use and runaway and/or criminal behavior. This is in line with previous research, which showed that young men who reported to survive from day to day had higher risks to engage in sex in exchange for money, food or shelter and to be sexually exploited (Josenhans et al., 2020). Moreover, sex offenders report that they typically target youth with family problems, without supervision, on the streets and in need of help (Beauregard et al., 2007).

The pathway of online dating and pay dates was particularly present in LGBTQ+ participants who were sexually exploited. Moreover, online dating was also present in participants who experienced other forms of sexual violence. These participants had often experienced social rejection caused by their gender identity or sexual orientation and a difficult coming-out phase. Other vulnerabilities included ACEs, unstable family environments and internalizing behavioral problems. The internet is known to facilitate several aspects of sexual violence, including victim identification, grooming, exploitation, and control tactics (Moss et al., 2023; O'Brien & Wen Li, 2020). Online dating and pay dates were ways for the participants to secretly experiment with sexual activities or to look for the affection they lacked in life. For sexually exploited participants another reason was to gain financial resources, which overlaps with the pathway of young men in survival mode. Although participants

initiated the contact through social media and dating apps, human traffickers quickly knew how to convert this contact to involuntary, by manipulation and coercion.

What these pathways have in common is that participants who were sexually exploited or experienced other forms of sexual violence often experienced a lack of protective and compensatory experiences, such as stability, support figures and experiencing love and attention. This important role of interpersonal relationships in promoting or hindering a youth's risk for sexual exploitation or other forms of sexual violence aligns with previous findings. For instance, young men who experienced negative early interpersonal relationships are more likely to seek out others to fulfil their needs, which makes them more vulnerable for exploitation (O'Brien, 2018; Reid & Piquero, 2014). When support figures are not available as protective factors, it is more likely that vulnerable youth turn to drugs, alcohol, smoking, sexual risky situations, criminal activities or other risky behaviors (Bath, 2008). In contrast, positive interpersonal relationships could be protective by helping young men to recognize unhealthy relationships, whilst fostering trust and secure attachment (O'Brien, 2018). A remarkable finding in the current study was that for participants who did have protective and compensatory experiences (e.g. having a supportive network, a school career or positive leisure activities), these experiences helped them to deal with the challenges in their life-course and to feel like they have a future perspective again. This underlines that protective and compensatory experiences are important in the context of resilience, as they can mitigate the impact of ACEs, sexual exploitation and other forms of sexual violence and can contribute to positive development (Hays-Grudo et al., 2021; Morris et al., 2021; Mercera et al., 2023). Therefore future research should address protective and compensatory experiences and how these factors can be integrated into (preventive) interventions for young men who experienced sexual exploitation, other forms of sexual violence or young men at-risk.

Third, in line with previous studies, experiences of taboo and stigma regarding victimization in men, bi- or homosexuality and sex work were highly prevalent and were primary barriers to disclose victimization (Alaggia, 2005; Hounmenou, 2017; Josenhans et al., 2020; Kavenagh et al., 2023; Ricardo & Barker, 2008). The current study showed that gender norms had a prominent role in this, which resulted in young men feeling ashamed, feeling they had to act tough and not expressing themselves. Literature underlines that the perceptions of men on gender norms and masculinity can lead to a more negative attitude towards asking for and seeking help (Donne et al., 2018; Josenhans et al., 2020; Wong et al., 2017). This is worrying, because the longer a person waits with disclosing experiences of violence and abuse, the more impact traumatic experiences can have on their well-being (Easton, 2012; Romano et al., 2019). Although there has been growing awareness, gendered assumptions among professionals working in the field of sexual exploitation and other forms of sexual violence still exist. There are professionals in practice, for example, who have the believe that the majority of those experiencing sexual exploitation are girls and women, while there are indications that young men in certain settings

are particularly vulnerable (e.g. young men in foster or residential care or living on the streets; Nodzinski & Davis, 2023). Young men still go unrecognized and receive relatively little attention in practice research, legislation and policy (Josenhans et al., 2020; Moynihan et al., 2018). More gender sensitivity is needed in all these fields in order to properly address sexual exploitation in young men, reach (potential) victims and to provide adequate care and support. Research, for example, should proactively recognize all genders and use gender inclusive language in order to gain knowledge on experiences and health care needs of young men and how compares to other genders (Moynihan et al., 2018).

Fourth, there was a wide variety in care and support needs of the participants, regardless of the subgroup, but often the received care and support did not match these needs. Participants experienced a lack of specialized healthcare or easily accessible and anonymous support. Unfortunately (specialized) care and support for young men who experienced sexual exploitation or other forms of sexual violence is still limitedly available (Pacheco et al., 2022). In order to support young men in their recovery process, further development of both easily accessible, practical and specialized care for young men and gender-diverse youth is of great importance. For instance, (anonymous) online assistance, peer-to-peer support or trauma and family treatment.

Moreover, during their life-course, many participants noted that healthcare excessively focused on their mental health and behavioral problems, rather than their (family) context or personal needs, such as keeping up with the client's pace and just being listened to. Furthermore, classifications of psychopathology led to feelings of stigma and being misunderstood. It is known that underlying signals of exploitation or other trauma in young men (e.g. anger, aggression) are often overlooked and attributed to other causes (Kavenagh et al., 2023; Pacheco et al., 2022). Acting-out behavior of young men for example is more often perceived as a characteristic of criminal behavior rather than characteristics of victimization (Josenhans et al., 2020) and research shows that justice-based rather than social-based responses dominate in care for young men (Nodzinski & Davis, 2023; Kavenagh et al., 2023). This is a consequence of not disclosing victimization in young men combined with professional's hardship in victim identification and their responses that may be negatively influenced by dominant gender norms. The above illustrates that many responses in health care received by the participants have not been trauma-informed. To adequately respond to the needs of these young men, trauma-informed care is needed (Moss et al., 2023), in which past and present positive and adverse experiences are included to understand trauma-related behavior (Thirkle et al., 2021). Six key principles are fundamental in such an approach, which can promote recovery and resilience to individuals impacted by trauma: safety; trustworthiness and transparency; peer support; mutuality; empowerment, voice and choice and cultural, historical and gender issues (Substance Abuse and Mental Health Services Administration, 2014). Conceptual refinement of trauma-informed care in the

context of sexual exploitation is recommended (Moss et al., 2023; Moynihan et al., 2018) to better address the needs of young men and to provide professionals guidance in care and support.

Limitations and strengths

Our study has several strengths. It provides a unique and in-depth insight into the background characteristics and needs of an underrepresented study population. Thereby it addresses multiple knowledge gaps, as the perspectives of young men themselves from a life course approach were previously underreported. The deeper understanding of factors that potentially play a role in the onset of sexual exploitation and other forms of sexual violence, as well as care and support needs, are important contributions to prevention efforts, adequate treatment, and future research. Another strength is the use of an interview approach in which participants were asked to reflect on a wide range of life domains (family, school, friends, and positive and negative experiences) without directing them. Participants could choose to elaborate on what was most relevant to them, which contributed to the richness of the results and a better understanding of the interrelatedness of experiences and possible consequences. Lastly, in the set-up of this study, the researchers cooperated with an advisory board of professionals in the field of policy, research and practice, aiming to ensure objectivity, clinical relevance and safety of the participants.

Several limitations should be considered. First, in the current study one method of data collection was used instead of triangulation. The voice of the family, social network or the involved health care or educational professionals – who according to the participants played important roles in their lives – are lacking which prevents us to cross-validate pathways to sexual exploitation from multiple perspectives. Future research involving perspectives of all involved should shed more light into this. Secondly, although parallels were found in the participants regarding vulnerabilities, different combinations of these vulnerabilities could contribute to victimization or high-risk situations on different time points in their lives. This is in line with literature (Reid and Piquero, 2016) and stresses the importance to approach young men experiencing sexual exploitation or other forms of sexual violence as unique individuals with their own life stories instead of ‘risk profiles’. Thirdly, participants were mainly approached through healthcare organizations. Their perspectives might differ from young men who are still in exploitative situations but remain under the radar, or from other known vulnerable subpopulations, like youth in juvenile detention, ethnic minorities, or homeless youth. Fourthly, this qualitative study does not demonstrate causal relationships between background characteristics and victimization. It does provide an understanding of factors that could play a role in victimization, providing direction for future quantitative research to investigate associations in their pathways. Fifthly, five clinical records were included which concern indirect and static information from the professional's point of view. To ensure that the participant’s perspectives on their life course remained central, the

information from the clinical records was only used to identify vulnerabilities. No statements were made on how these vulnerabilities led to victimization, as the perspectives of the participants were missing. Finally, the results section indicated the approximate number of participants who reported certain vulnerabilities or experiences (e.g. three-quarter). A conscious decision was made not to give specific numbers, since the quantity does not indicate the importance for or impact on an individual participant. The approximate numbers do teach us about background characteristics that are relatively common in young men who experiences sexual exploitation and other forms of sexual violence and this provides useful insights for risk assessment and screening purposes.

Conclusion

This study made an important contribution to the limited available knowledge on sexually exploited young men. The findings aligned with previous research on risk factors, provided new insights into their accumulation and the role of protective and compensatory experiences. The broad range of individual-, family- and environmental risk factors underlined that sexual exploitation is a complex phenomenon. It is a detrimental outcome of multiple possible underlying risks and pathways. Early interventions are needed in young men at high-risk in order to interrupt the often present negative cycle of adversity and thereby preventing victimization. These should integrate a family oriented and trauma-informed approach, in which past and present positive and adverse experiences are included, aiming to understand behavior and address underlying causes. This study also made clear that a major challenge in protecting sexually exploited young men and also young men who experienced other forms of sexual violence are prevailing gender norms. Creating more awareness among young men about victimization, ways to talk about it and forms of (anonymous) more personalized support is crucial, in order to lower the threshold to seek and receive help. As a precondition, professionals (e.g. in practice, education, care and law enforcement) should become more aware of victimization in young men to enhance (early) detection and intervention in a gender sensitive way. Moreover, the identified care and support needs could inform further development of health care and support opportunities to better match the needs of this population. Our study has addressed multiple knowledge gaps, but future research should shed more light on the pathways to sexual exploitation in young men. We recommend clarifying underlying mechanisms between ACEs, protective and compensatory experiences, emotional and behavioral problems, risky behavior and victimization with the purpose to identify critical points to intervene in this negative cycle of adversity. Overall, this study made an important first step to provide practice, policy and research guidance in the establishment of more targeted prevention, adequate interventions, and future research.

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Chapter 4

High risk, yet overlooked: a clinical record study on background characteristics of sexually exploited and at risk girls with mild intellectual disabilities

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Chapter 5

Prevalence of Adverse Childhood Experiences in adolescents with special educational and care needs in the Netherlands: a case file study of three special educational and care settings

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Abstract

Introduction

To date, Adverse Childhood Experiences (ACEs) in adolescents with special educational and care needs have received little attention as an important risk factor for their behavioral, emotional, and learning problems. *Objective:* This study provides insight into ACE prevalences and family risk factors in three Dutch special educational and care settings for vulnerable school-aged youth.

Methods

268 adolescents (10-18 years old) with severe and persistent problems at individual and family level, from a special educational setting (setting 1; n = 59), a residential care setting (setting 2; n = 86) and an alternative educational setting (setting 3; n = 123) were included. *Methods:* A retrospective cross-sectional study design was used. Data were collected between 2016 and 2019 through structured case-file analysis.

Results

A substantial proportion of the adolescents in all settings experienced at least one ACE, with 69.5% in setting 1, 84.9% in setting 2 and 95.1% in setting 3. Family risk factors were relatively common, among which a limited social network in all settings (20-50%) and debts in setting 2 and 3 (25-40%).

Conclusions

The substantial ACE prevalence underline the need for early ACE awareness. Trauma-informed care and education are needed to adequately understand trauma-related behaviors, prevent retraumatization, and enhance learning and healthy development. Given that ACEs regarding household dysfunction and family risk factors seem to be common in adolescents with special educational and care needs, family centered approached should be implemented as well in the interest of lifelong health and well-being for both adolescents and their families.

Introduction

In recent decades, both research and practice have become more aware of the prevalence and impact of Adverse Childhood Experiences (ACEs). Historically, studies of ACEs focused on adults and despite an increased focus on children in ACEs research in recent years (Narayan et al., 2021), research on the prevalence of ACEs in children is still sparse. Moreover, children with special educational or care needs are rarely included (Masseti et al., 2020), while limited research shows that ACEs are associated with special educational and health care needs (Kan et al., 2020). There is an association between ACEs and problems that children with special educational and care needs face, such as developmental problems, learning difficulties, behavioral problems, social problems, health-risk behaviors, psychopathology, and mental and physical health problems (Bright et al., 2016; Garrido et al., 2018; Goldenson et al., 2020; Hunt et al., 2017; Liming & Grube, 2018; Schäfer et al., 2022). Moreover, ACEs are known to be negatively related to school success, such as poor academic performance, a lack of school engagement, reduced attendance at school and an increased risk for school dropout (Crouch et al., 2019; Morrow & Villodas, 2017; Stempel et al., 2017; Webster, 2022). More knowledge on the prevalence of ACEs in children with special educational and care needs is crucial to understand their problems and to improve learning, development and health outcomes. Therefore, this study aims to gain a better understanding of the prevalence of ACEs and other family risk factors among Dutch adolescents with special educational and care needs.

Children with special educational and care needs

Children with special educational and care needs are characterized by their increased use of multiple systems of care (Kan et al., 2020). In a sample of children in the United States, aged 6-17, Kan et al. (2020) demonstrated that each additional ACE increased the likelihood of the child having a special educational or health care need by 26%, such as the need or use of specialized treatment, counselling for an emotional, behavioral or developmental condition and above-routine need of medical, mental health or educational services. When regular educational systems and primary care facilities can no longer adequately support the development of the child and the family, more intensive support is required. In The Netherlands there are various forms of more intensive youth care and educational services, among which special education, outpatient youth care services (e.g. outpatient care, day treatment, specialized treatment), residential youth care services, youth protection and probation measures, or a combination of these forms (Centraal Bureau voor de Statistiek, 2023; Nederlands Jeugdinstituut, s.d.). Children are eligible for this support if they are referred by, for example, a general practitioner, medical doctor, judge, youth protection service or the municipality. Thus by 'children with special educational and care needs' we refer to children who receive these more intensive forms of education or care than the regular education and primary care system in the Netherlands provides.

When there are problems in multiple areas of life, such as psychological, mental, physical or intellectual functioning, parenting, finances, housing or education, these forms of youth care provide assistance. Recently a Dutch study on the characteristics of youth receiving these forms of youth care services has been published (Centraal Bureau voor de Statistiek, 2023). Children who received youth care were more likely to attend special education, grow up in low-income or indebted households, or in households where someone uses mental health services and/or has an indication for intellectual disability support. For a better understanding of the potential role of ACEs in the challenges these children and families face, more knowledge on the prevalence of ACEs in children with special educational and care needs is needed. Given the research sample of the current study, we specifically focus on adolescents aged 12-18 years old.

The Adverse childhood experiences framework

ACEs are risk factors for development, health and societal functioning that are common, interrelated, and have cumulative effects (Gervin et al., 2022; Turney, 2020). Originally ACEs were defined as ten experiences of abuse, neglect in the family or household dysfunction that significantly contribute to negative health outcomes in childhood, adolescence and/or adulthood (Anda et al., 2009; Felitti et al., 2019). These experiences encompass physical and emotional abuse, physical and emotional neglect, sexual abuse, parental separation or divorce, domestic violence against the mother, substance abuse of a household member, household member with mental illness and incarceration of a household member and are also referred to as 'original ACEs'. The ACE framework continues to evolve. In recent years, other experiences have been recommended to be added to the ACE framework, such as peer victimization, battering, gambling problems in the household, contact with child protective services or foster care placement, poverty, neighborhood violence or discrimination (Afifi et al., 2020; Hawes et al., 2021). Thus, the ACEs framework continues to expand with experiences outside the family unit, in the community (Hamby et al., 2021; Portwood et al., 2021). Given the still evolving developments in this area of research, there is not yet an internationally agreed definition of ACEs or a uniform operationalization to assess ACEs in children and adults (Karatekin & Hill, 2019). However, the original framework consisting of ten ACEs is a worldwide commonly used and investigated operationalization and is therefore used in this study (Anda et al., 2009; Felitti et al., 2019).

ACE prevalence in children and adolescents

Prevalence findings on ACEs in children and adolescents that are available show considerable variation between studies due to for example different study populations, ACE frameworks, instruments and approaches and small sample sizes (Masseti et al., 2020). Therefore, when examining study results on ACE prevalence, these limitations of existing ACE research should be taken into account. The systematic

review by Carlson et al. (2020) found that approximately two-thirds of school-aged youth (i.e. < 18 years old) in the general population had had at least one ACE of the original framework, regardless of where they lived in the world. Most studies on ACE prevalence in adolescents have been conducted in the United States. A study among high school adolescents in the United States showed that 62.5% experienced at least one ACE of the original framework (Meeker et al., 2017). Another study in the United States using the original framework demonstrated an ACE prevalence of 55.7% among adolescents aged 12-17 (Bethell et al., 2017). In the Netherlands no studies specifically focusing on adolescents have been conducted. Dutch data on ACE prevalence in 9-13 year old children in regular elementary schools revealed that about 45% experienced at least one ACE and about 11% experienced 3 or more ACEs of 10 measured ACEs of the original framework (Vink et al., 2019).

There are limited findings available on the prevalence of ACEs in adolescents with special educational and care needs, and most studies on this vulnerable group include a broader age range. For example, the results of a nationally representative longitudinal study in the United States on children involved with child protection services found that by age 6, approximately 70% of the children had experienced 3 or more out of 8 ACEs of the original ACE framework (Clarkson Freeman, 2014). Pooled data of a systematic review showed that nearly 87% of justice-involved youth (i.e. < 18 years old) in 13 countries had experienced at least one ACE from the original framework, and that they were 12 times more likely than their peers to have experienced at least one ACE (Malvaso et al., 2021). Recent Dutch research among children with severe social-emotional and behavioral problems in primary and secondary special education schools aged 8-18 years showed that about 80% experienced at least 1 ACE and about 24% experienced four or more ACEs of the original ACE framework (Offerman & Asselman et al., 2022). Additionally, results of a Dutch study among children with cognitive and adaptive limitations receiving residential care revealed that approximately 86% of these children had experienced at least one ACE and 25% experienced 4 or more ACEs out of ten ACEs from the original framework (Felitti et al., 2019; Vervoort-Schel et al., 2021). In sum, limited research has been done on ACEs in adolescents with special education and care needs and existing results are difficult to compare. All cited literature above is American or Dutch. The American youth care system cannot be compared one on one with the system in The Netherlands, due to for example differences in cultural contexts, accessibility of care and thus heterogeneity in populations. Yet, the available American and Dutch results do indicate an increased ACE prevalence amongst children and adolescents with special educational and care needs compared to studies in regular schools or based on studies on children and adolescents in the general population.

Impact of ACEs on child and family functioning

ACEs can derail neurodevelopment, especially during critical periods of brain plasticity such as the first years of life and adolescence (Bundy et al., 2018). The effects on emotional, social, behavioral, cognitive, mental and physical health can be detrimental (Morris et al., 2021). Studies have shown that adolescents who reported ACEs were more likely to experience depression, anxiety, drug abuse, antisocial behavior, suicidality and cognitive difficulties (Meeker et al., 2021; Olofson et al., 2018; Schilling et al., 2007). Ensuring safe, stable, nurturing relationships for all children and adolescents in all settings is key to preventing ACEs and mitigating their effects in the interest of lifelong health and the health and well-being of future generations (Gervin et al., 2022; Merrick et al., 2020). Unfortunately, family stressors such as debts, housing problems, a limited social network, parental intellectual disabilities, or parental ACEs can compromise safe, stable, nurturing relationships and be a risk factor for parenting and family functioning (Crouch et al., 2019; May & Harris, 2020; Merrick & Guinn, 2018; Thornberry et al., 2013; Vervoort-Schel et al., 2021). Since a wide range of family risk factors can impact child and family functioning, the current study focuses on family risk factors as well, besides its focus on the ACEs from the original framework.

Objectives of this study

To date, for adolescents with special educational and care needs, ACEs have been overlooked as an important risk factor for behavioral, emotional, and learning problems and the opportunities for them to optimally benefit from or prevent special education and youth care. Therefore, this study gives insight into prevalences of ACEs and family risk factors in a convenience sample of adolescents with special educational and care needs from three specialized educational and youth care settings in The Netherlands. The original ACE framework (Anda et al., 2009; Felitti et al., 2019), consisting of ten ACEs, was used in this study. For these ACEs a similar operationalization was available between the three settings. In addition, six family risk factors were included, since these factors are known to impede safe, stable, nurturing relationships and thereby family functioning.

The current study specifically focuses on adolescents. The settings include: 1) two special education schools; 2) a residential youth care center and 3) an outpatient alternative educational facility providing both special education and youth care. Thereby, our convenience sample consists of three of the four categories of more intensive forms of youth care services that are provided in The Netherlands as described in this introduction. These settings are indicated when regular education systems and primary care facilities can no longer adequately support the development of the child and the family. Adolescents in all three settings experience a combination of severe and persistent individual, family, and social context problems, but the settings respond to different needs: special education only, residential admission or a combination of special education and youth care services from day admission

(see the paragraph ‘settings’ for a detailed description). Therefore the prevalence of ACEs and family risk factors are explored per setting. This study provides a unique insight into ACE prevalence in three underrepresented vulnerable subgroups of adolescents with special educational and care needs. This study aims to contribute to a better understanding of the potential role of ACEs and family risk factors in the challenges these adolescents face, and to inform research, policy and practice.

Methods

Design and procedures

This study is based on a convenience sample which stems from three independent larger studies investigating ACEs in vulnerable school-aged populations, which were conducted at schools from a special education foundation (Offerman et al., 2022), a national residential youth care center (Vervoort et al., 2021), and an alternative educational facility (Pronk et al., 2020). All studies used a retrospective cross-sectional study design and the variables were selected based on scientific literature on ACEs and family risk factors. All variables were operationalized in codebooks. Data were collected between 2016 and 2019 by means of structured analysis of case-files, containing reports such as school, youth care, diagnostic, and psychiatric reports from previous and current schools or care settings, as well as day-to-day journals at two of the three settings (i.e., the special education schools and the alternative educational facility). The reports included information about the adolescent, their parents and family and social context. For the present study, we combined the fully anonymized data of the three separate studies. Each separate study protocol was approved by the Ethics Review Board of the University of Amsterdam (residential care center 2018-CDE-8871; special educational setting 2017-CDE-7603; alternative educational facility 2017-CDE-7736).

Setting

The sample consisted of Dutch adolescents who had been assigned to special education (setting 1), a residential youth care center (setting 2) or an alternative educational facility (setting 3).

Setting 1. Two urban secondary special education schools for students with emotional and behavioral disorders were included. These special education schools provide education, care and guidance for youth between 11 and 18 years old (by exception from 10 years old) with severe and persistent internalizing and/or externalizing behavioral and social emotional problems, whose educational and support needs could not sufficiently be met by regular schools. Previous research within this setting explored 172 case-files of 8 to 18 year old students with emotional and behavioral disorders and demonstrates for example that about 68% of the students had two or more school switches prior to their special education placement at the time of the case-file analysis. The number of school switches in this population is corrected for the primary to secondary school switch. Autism

spectrum disorders (35%), attention-deficit/hyperactivity disorder (35%) and oppositional defiant disorder (17%) are the most commonly reported diagnoses, with 41% of the students having comorbid classifications of the 4th or 5th edition of The Diagnostic and Statistical Manual of Mental Disorders (DSM-4; DSM-5; American Psychiatric Association, 2000; American Psychiatric Association, 2013). 54% of the students used medication related to their DSM-4 or DSM-5 classifications. 86% of the students had received family-oriented social work and therapy, and 87% had received a form of therapy focussing on the child's individual problems (Offerman et al., 2022). Often, a combination of child, family and school factors plays a role in special education placement. Mostly, this placement is voluntary – as a last opportunity to receive education – after an accumulation of negative experiences at previous, often regular schools. Youth participate in the special education program during the hours of a regular school day (i.e., approximately six hours per day), potentially at least up until they reach the compulsory school age of 16 years old. Apart from special education, various specialized youth health care partners provide diagnostics and individual guidance or treatment in the schools in collaboration with the school and parents, to reduce problem behavior and enhance cognitive and social emotional development.

Setting 2. One national residential youth care center situated in a rural area in the Netherlands was included. This setting provides specialized clinical observation, diagnostics and treatment for children between two and 18 years old, with intellectual disabilities and borderline intellectual functioning and severe, persistent and complex mental- and behavioral health problems. Previous research within this setting, exploring 69 case-files of children and adolescents (≤ 18 years old) with intellectual disabilities, gives an indication of the problems those children and adolescents face (Vervoort-Schel et al., 2021). Outcomes of the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001), reported by residential care staff, showed that almost two third of youth scored in the borderline clinical or clinical range for total problem behavior and around half of the children scored in the borderline clinical or clinical range for externalizing behavior problems and internalizing behavior problems. One third of the sample experienced attachment problems and/or trauma and stressor related problems. Another study within this setting, exploring 134 case-files of children and adolescents with ID or borderline intellectual functioning, showed that 85% of the children had a comorbid clinical disorder (Vervoort-Schel et al., 2021). In this study it was also found that family problems were relatively often present, as 76% of the children grew up in families with multiple and complex problems. These are families experiencing an accumulation of problems in at least six out of the following seven domains: child, parental, child rearing, family functioning and contextual factors, social network and prior history of support services (Dekovic & Bodden, 2019). About 28% of the children had parents with intellectual disabilities, about 32% parents with ACEs and 28% had parents with debts (i.e. meaning that a professional reported in the case-file that the family in which the child

grew up experienced any kind of debts or that debt counselling agencies have been involved). The residential placement is mostly voluntary, however, in some cases placement is ordered by court. Youth participate in a 24-hour program for approximately 1.5 years. During placement, the great majority of the included adolescents participate in a program of the involved special educational school for students with intellectual disabilities.

Setting 3. One urban alternative educational facility was included. This facility provides education and care for youth between 12 and 18 years old, who are at risk for school drop-out or (secure) residential placement because of a complex combination of individual, family, and social context problems. This facility was developed in 2011 as an innovative program to reduce the number of residentially placed youth, especially in secure residential facilities. Participation in the program can be voluntary as well as stimulated or ordered by court as a last chance to avoid secure residential placement. Youth participate in the 12-hour program (i.e., 8 a.m. to 8 p.m. program), for around six to nine months, before returning to regular or special education, after which their coach stays involved for at least six more months. The program is an integration of special education and youth care (i.e., academic classes, individual and group trainings, mental health therapies, workshops) and focused on all life domains (i.e., school, home, leisure time). Previous research based on case-files gives an indication of the severity of problems of adolescents at this alternative educational facility. Adolescents of the studied facility for example face limited intellectual abilities (33%), trauma and stress-related disorders (15%), disruptive behavior disorders (41%), substance use disorders (16%), and criminal involvement (20%), based on case-file analysis (Pronk et al., 2020). Furthermore, based on structured questionnaires (Pronk et al., 2021), adolescents score in the borderline clinical or clinical range on the Brief Problem Monitor (BPM; Achenbach et al., 2011) for externalizing behavior problems for 83% (teacher-reports), 40% (parents-reports) and 13% (self-reports) and for internalizing behavior problems 48% (teacher-reports), 37% (parent-reports) and 10% (self-reports). Furthermore, 64% of parents reported severe parenting stress, and 43% mild or severe problems in family functioning. Psychologists reported severe to extreme problems on adolescent functioning (57%), quality of the context (72%), severity of needs (56%), and urgency of needs (71%).

Sample

The combined sample consisted of 268 adolescents ($N = 268$), between 10 to 18 years old ($M_{\text{age}} = 14.2$ years; 66% boys); 59 from setting 1 (special educational schools); 86 from setting 2 who were discharged between 2016-2019 (residential care center); 123 from setting 3 who were assigned to the setting between 2014-2017 (alternative educational setting). For this study, only the subgroup of adolescents from 12 to 18 of setting 1 and 2 were included. All were assigned to a special educational

or care setting - hereafter referred to as 'setting' - due to severe and persistent problems at the individual, family and context level.

Background information on the behavioral problems of the adolescents was present from the samples of setting 1 and 2. In these settings the outcomes of the Brief Problem Monitor (BPM; Achenbach et al., 2011; setting 1) and the Child Behavior Checklist/6-18 (CBCL; Achenbach & Rescorla, 2001; setting 2), reported by parents/caregivers, were collected. In setting 3 this data was not available. Clinical scores on internalizing problems were present in 13.6% of adolescents in setting 1 and in 47.7% of the adolescents in setting 2. Clinical scores on externalizing problems were present in 28.8% of adolescents in setting 1 and in 53.5% of the adolescents in setting 2.

Measures

To systematically collect the information for the current study, case-files were assessed using scoring protocols and codebooks, available from the authors. The operationalizations used in each study were extensively compared and for some variables a minor recoding was done on the original data to guarantee conformity (e.g., the categorization of country of birth of parents). The following operationalizations were used:

Demographic characteristics. Four items were included: gender, age at the start of the intervention, age during case-file study or after intervention, and the country of birth of parents.

Adverse Childhood Experiences. Ten variables were assessed, based on the original ACE framework (Anda et al., 2009; Felitti et al., 2019), that is physical abuse, emotional abuse, physical neglect, emotional neglect, sexual abuse, parental incarceration, parental separation or divorce, domestic violence, parental substance abuse and parental mental health problems. These items were coded based on information derived from a professional report in one or more documents in the case-file. ACEs were coded as present (1) if the description in the data-files matched the chosen operationalization. If the information did not match, the ACE was coded as absent (0). Table 2 presents the ACEs used with accompanying definitions. The sum of the ten original ACEs was calculated, resulting in a total score (0 to 10).

Family risk factors. Six items were included, partially based on expanded ACE frameworks (Crouch et al., 2019; Jaffee et al., 2013; Merrick & Guinn, 2018; Thornberry et al., 2013; Vervoort-Schel et al., 2021). These items were separation from parents due to out-of-home placement, economic hardship - e.g. financial problems or debts, housing problems - and other family risk factors such as intellectual disability of the parent(s), ACEs of parents and a limited social network. ACEs of parents were coded in setting 1 and 2 only. In the residential care center, the variable residential care placement concerned the presence of an out of home placement before admission to the current residential care setting. Table 3 presents the family risk factors with accompanying definitions.

Table 1. Operationalization of Adverse Childhood Experiences original framework (Anda et al, 2009)

Physical abuse	The child experienced pushing / beating / grabbing / slapping / kicking or being hit so hard by (one of) the biological parents or primary caregiver(s) that it resulted in marks or injury
Emotional abuse	The child was sworn at / insulted / threatened or put down by (one of) the biological parents or primary caregiver(s) that may physically have hurt the child
Physical neglect	The parent's or primary caregiver's behavior interfered with the child's care; wearing dirty clothes / bad hygiene / not enough personal living space / no safe living space / not enough to eat / not taken to a doctor when needed or forced to take care of themselves
Emotional neglect	The parent(s) or primary caregiver(s) didn't make the child feel special and loved / the family not being a source of strength, protection and support or the child received little attention
Sexual abuse	The child was involuntarily touched in a sexual way / forced into any form of sexual contact / forced into watching sexual content by a parent(s), primary caregiver(s), adult, relative, family friend or stranger
Parental incarceration	A parent or primary caregiver went to prison
Parental separation or divorce	The biological parents were (temporary) separated or divorced
Domestic violence	The father, mother or primary caregiver was (1) pushed, grabbed, slapped, or had something thrown at her/him (2) kicked, bitten, hit with a fist, or hit with something hard (3) repeatedly hit over at least a few minutes (4) threatened with or hurt by a knife or gun
Parental substance abuse	The parent or primary caregiver used excessive alcohol or drugs
Parental mental health problems	1) biological parent(s) had mental health problems (symptoms or disorders) interfering with the child's care 2) a parent ever attempted suicide

Table 2. Operationalization of family risk variables

Intellectual disabilities	There was a (suspicion of) intellectual disability of (one of) the biological parents
ACEs parents	Parent(s) experienced at least one of ten ACEs*
Debts	The family experience(d) economic hardship (e.g., financial problems, debts)
Housing problems	The family experience(d) housing problems
Limited social network	The family has a limited social network
Residential care placement	The child was separated from parents due to out-of-home placement

* According to the original framework (Anda et al., 2009).

Each study of the three different settings had an inter-rater reliability percentage which can be considered as sufficient. In setting 1 and 2, the percent agreement was calculated. This statistic is directly interpreted as the percent of data that are correct (McHugh, 2012). In setting 3 the Cohen's Kappa was calculated which accounts for false agreements. For 10.5% of the case-files in setting 1, the inter-rater reliability for the complete codebook (162 items), including the ACEs, was 86.4%. For 25.0% of the case-files of the total case-file study ($N = 169$) in setting 2, the inter-rater reliability was 96.6%. For 11.0% of the case-files of setting 3, the Cohen's Kappa for the ACE's was .82 which is considered as good (McHugh, 2012). Due to initial low inter-rater reliability scores for some categories in this setting, additional agreements were made and another 11.0% of case-files resulted in 68.0% for the subscale emotional neglect (moderate) and 35.0% for the subscale physical neglect (minimal). Therefore, for these two categories, every file was discussed and scored together to reach consensus.

Statistical analyses

All statistical analyses were conducted in SPSS, version 26 (IBM, Armonk, NY, USA). Descriptive statistics were used to present the demographics and to explore the prevalence of ACEs and variables in the family context in the total sample and by setting.

Results

In Table 3 the demographic data of the sample are presented. The mean age (start) and the mean age (at the time of case-file review/end intervention) in the total sample was respectively 14.2 (range 10-18) and 15.3 years old (range 12-19). Differences between settings in age, gender and country of birth of parents were explored to understand how the settings relate to each other in terms of

demographics. There were significant differences between the groups in age (start) and age (at time of case-file review/end intervention). Post hoc comparisons indicated that both age variables of the adolescents in the alternative educational facility (setting 3) were higher than the age variables of the adolescents in special education (setting 1) and in the residential care center (setting 2). In all settings, the study sample consisted of more males than females. Gender differences between groups were found, in which the proportion males was significantly higher in setting 1 than in setting 2 and setting 3. Although there were differences between settings in age variables and gender, logistic regression analyses showed that these demographic variables did not significantly impact the number of ACEs in these settings (setting 1: $\chi^2(3, n = 59) = .46, p > .05$; setting 2: $\chi^2(3, n = 86) = .68, p > .05$; setting 3: $\chi^2(3, n = 123) = .90, p > .05$). As assumptions for the variable Country of birth of parents were violated, a Chi-square test was performed for a combined group of categorizations, that is, 1) both parents born in the Netherlands and 2) at least one parent born in a foreign country. It was found that the proportion of both parents born in the Netherlands differed significantly between all three settings, with the highest proportion of both parents born in the Netherlands in setting 2. Also, the proportion of at least one parent born in a foreign country differed significantly between all three settings, with the highest proportion of at least one parent born in a foreign country in setting 3.

Table 3. Demographics

	Setting 1: Special education (<i>n</i> = 59)	Setting 2: Residential care center (<i>n</i> = 86)	Setting 3: Alternative educational facility (<i>n</i> = 123)	Total (<i>n</i> = 268)	<i>p</i>
Gender*					
Male	86.4% (51) _a	58.1% (50) _b	61.8% (76) _b	66% (177)	$\chi^2 (2) = 14.335, p = .001$
Female	13.6% (8) _a	41.9% (36) _b	38.2% (47) _b	34% (91)	
Age at start intervention (<i>M</i>)*					
	13.3 _a SD 1.4 RNG 11-17	13.3 _a SD 1.7 RNG 10-17	15.3 _b SD 1.1 RNG 12-18	14.2 SD 1.7 RNG 10-18	$H (2) = 92.803, p = .000$
Age during case-file study / after intervention (<i>M</i>)*					
	14.7 _a SD 1.6 RNG 12-19	14.5 _a SD 1.8 RNG 12-19	16.0 _b SD 1.2 RNG 12-18	15.3 SD 1.6 RNG 12-19	$H (2) = 50.703, p = .000$
Country of birth of parents*					

Both parents born in The Netherlands	27.1% (16) _a	65.1% (56) _b	14.6% (18) _c	33.6% (90)	$\chi^2 (2) = 56.824, p = .000$
At least one parent born in a foreign country	61.0% (36) _a	29.1% (25) _b	74.8% (92) _c	57.1% (153)	

***significant difference(s) between groups**

a, b, c Within each row, percentages that significantly differ between settings at the .05 level get different subscript letters (i.e. 'a' differs from 'b'; 'a' and 'a' both differ from 'b'; 'a', 'b', 'c' all differ from each other; no subscript letter indicates no significant difference between the setting and other settings).

Table 4 presents the prevalence of ACEs. A substantial proportion in all settings experienced at least one ACE, with 69.5% in setting 1, 84.9% in setting 2 and 95.1% in setting 3. In setting 2, even 81.3% of the adolescents experienced at least 2 ACEs and 62.6% at least 3 ACEs. The proportion of at least 2 ACEs in setting 1 and 2 was respectively 35.6% and 58.1%. The proportion of at least 3 ACEs in setting 1 and 2 was respectively 23.7% and 48.8%.

The mean number of ACEs in the total sample was 2.7, with a relatively high standard deviation ($SD = 2.0$) and large range (0-9), see Table 2. In setting 1, 2 and 3 the mean number of ACEs was respectively 1.6 ($SD = 1.9$; range 0-8), 2.4 ($SD = 1.8$; range 0-9) and 3.3 ($SD = 2.0$; range 0-9).

Exploring the prevalence of the types of ACEs, it was found that parental separation or divorce was most prevalent in all settings, namely 47.5% in setting 1, 59.3% in setting 2 and 74.8 in setting 3. Emotional neglect was especially present in setting 3 (61.8%). Yet, in setting 1 and 2 the presence of this ACE was relatively high as well (approximately one-fifth of the adolescents) compared to other types of ACEs within these settings. In all settings approximately 30-40% of the biological parents experienced psychological problems. Domestic violence was relatively common among adolescents in setting 2 (26.7%) and setting 3 (28.5%). In all settings less common ACEs were incarceration of parents or primary caregivers and sexual abuse.

Table 4. Prevalence of Adverse Childhood Experiences

	Setting 1: Special education (n = 59)	Setting 2: Residential care center (n = 86)	Setting 3: Alternative educational facility (n = 123)	Total (n = 268)
<i>Minimum number of ACEs</i>				
≥ 1 ACEs	69.5% (41)	84.9% (73)	95.1% (117)	86.2% (231)
≥ 2 ACEs	35.6% (21)	58.1% (50)	81.3% (100)	63.8% (171)

≥ 3 ACEs	23.7% (14)	48.8% (42)	62.6% (77)	49.6% (133)
≥ 4 ACEs	15.3% (9)	24.4% (21)	42.3% (52)	30.6% (82)
≥ 5 ACEs	8.5% (5)	10.5% (9)	22.0% (27)	15.3% (41)
≥ 6 ACEs	6.8% (4)	4.7% (4)	15.4% (19)	10.1% (27)
Number of ACEs	1.6	2.4	3.3	2.7
	SD 1.9	SD 1.8	SD 2.0	SD 2.0
	RNG 0-8	0-8 RNG	RNG 0-9	RNG 0-9
<i>Type of ACEs</i>				
Physical abuse	13.6% (8)	18.6% (16)	31.7% (39)	23.5% (63)
Emotional abuse	11.9% (7)	15.1% (13)	21.1% (26)	17.2% (46)
Physical neglect	16.9% (10)	8.1% (7)	48.0% (59)	28.4% (76)
Emotional neglect	22.0% (13)	23.3% (20)	61.8% (76)	40.7% (109)
Sexual abuse	1.7% (1)	14% (12)	13% (16)	10.8% (29)
Parental separation/divorce	47.5% (28)	59.3% (51)	74.8% (92)	63.8% (171)
Psychological problems biological parent(s)	28.8% (17)	39.5% (34)	29.3% (36)	32.5% (87)
Substance abuse parent/primary caregiver	6.8% (4)	22.1% (19)	19.5% (24)	17.5% (47)
Domestic violence	11.9% (7)	26.7% (23)	28.5% (35)	24.3% (65)
Incarceration parent/primary caregiver	3.4% (2)	9.3% (8)	5.7% (7)	6.3% (17)

Table 5 describes the prevalence of family risk factors. In setting 1, a limited social network of the family was present in at least half of the adolescents. In setting 2 having a parent with a suspected intellectual disability, a family with debts and a family with a limited social network was prevalent in about a quarter of the adolescents. In setting 3, relatively many (42.3%) adolescents experienced an out-of-home placement in residential care. All adolescents in setting 2 were in residential care at that specific setting, but 44.2% of them already experienced out-of-home placements before the placement in setting 2.

Table 5. Family risk factors

	Setting 1: Special education (n = 59)	Setting 2: Residential care center (n = 86)	Setting 3: Alternative educational facility (n = 123)	Total (n = 268)
Intellectual disability parent(s) (suspicion)	0% (0)	25.6% (22)	9.8% (12)	12.7% (34)
ACEs parent(s)	16.9% (10)	22.1% (19)	-	10.8% (29)
Debts	8.5% (5)	23.3% (20)	39.8% (49)	27.6% (74)
Housing problems	5.1% (3)	7.0% (6)	19.5% (24)	12.3% (33)
Limited social network	52.5% (31)	26.7% (23)	20.3% (25)	29.5% (79)
Residential placement	16.9% (10)	44.2% (38)	42.3% (52)	37.3% (100)

Discussion

In the current study, we have explored the prevalence of ACEs and family risk factors in Dutch adolescents with special educational and care needs in three settings (i.e., special education, residential youth care and an alternative educational facility). The aim is to raise awareness of the prevalence of ACEs in this vulnerable group of adolescents and to advance research, policy and practice in this area. Two main findings are discussed below, which are 1) ACE prevalence is substantial in adolescents with special educational and care needs and 2) family risk factors are common in the overall sample.

First, it was found that a large proportion of the adolescents in all settings experienced at least one ACE, with 69.5% in setting 1, 84.9% in setting 2 and 95.1% in setting 3. At least two ACEs were experienced by 35.6%, 58.1% and 81.3% of the adolescent in respectively setting 1, 2 and 3. These prevalence rates are relatively high compared to ACE research in adolescents in the general population, as described in the introduction section of this study. These studies showed that the prevalence of at least 1 ACE was 56.0% (Bethell et al., 2017) and 62.5% (Meeker et al., 2017). Our prevalence rates are also relatively high compared to studies on children in a broader age range, in which the prevalence of at least 1 ACE varied from 45% to 66% and the prevalence of at least 3 ACEs ranged from 4% to 10% (Bright et al., 2016; Carlson et al., 2020; Turney, 2020; Vink et al., 2019). Although the mean age of the current study population was higher ($M = 15.3$) compared to the mean ages in for example the studies of Bright et al. (2016; $M = 8.6$ years) and Vink et al. (2019; $M = 11$ years), the ACE prevalence in the current sample of adolescents with special educational and care needs still seem considerable high,

also in light of the finding of the present study that age was not significantly associated with the number of ACEs.

Our findings indicate a substantial ACE prevalence in adolescents with special education and care needs, which is consistent with national (Offerman & Asselman et al., 2022) and international (Clarkson Freeman, 2014; Malvaso et al., 2021) data on children and adolescents with special needs, also described in the introduction. All three settings in the current study provide education and/or care for children and adolescents with severe and persistent mental- and behavioral problems. As the number of ACEs increase, the risk for developmental, behavioral, emotional and learning problems and subsequent special education and care needs increase as well (Felitti et al., 2019; Kan et al., 2020). The cumulation of ACEs may underlie or contribute to the severe and persistent mental and behavioral problems for which the adolescents in the current sample receive special education and care. Since the relationship between ACEs and mental health and behavioral problems could not be investigated in the present study, it is not possible to draw conclusions about the such associations. However, based on literature and the high prevalence of both mental health and behavioral problems and ACEs, a relationship between those factors seems plausible.

Second, besides ACEs, family risk factors were clearly present in the overall sample, with debts, limited social networks and previous residential care placements being the most prevalent. These family risk factors impair parental and family functioning, can induce the likelihood of experiencing ACEs and reduce the likelihood of safe and stable nurturing parent-child relationships (Schofield et al., 2018; Vervoort-Schel et al., 2021). There were also parents with ACEs or intellectual disabilities. It is known that parental ACEs, intellectual disabilities or psychological problems, which were a relatively common ACE in the current sample, can disrupt parental and family functioning and negatively affect their children's outcomes (Crouch et al., 2019; Jaffee et al., 2013; May & Harris, 2020; Zhang et al., 2022). Kan et al. (2020) found that living with a family member with psychological problems was associated with twice the odds of the child having special educational and care needs. It was demonstrated that this association might be explained by the strong association between living with a family member with psychological problems and the child having an emotional or behavioral disorder (Kan et al., 2020). Vice versa, it is known that raising a child with mental health problems, can strain parenting and parental mental health and increase the risk for the development of ACEs experienced by children (Murphy, 2011). Thus, the health of the child and the health of parents are interconnected (Purpura et al.) The consequences of ACEs and family risk factors on children's development, behavior and learning could lead to increased needs that require more intensive forms of special educational and youth care services. These results illustrate the importance of safe, stable and nurturing environments and promoting resilience to buffer against the often present family adversities in adolescents with special education and care needs (Burstein et al., 2021). Future research should

address the mechanisms through which ACEs and family risk factors affect special educational and care needs. This knowledge can help to mitigate the effects of ACEs and family risk factors in the interest of lifelong health and well-being of children and their families.

Study limitations and strengths

Several limitations of this study should be considered. First, this study was based on a convenience sample with relatively small sample sizes of heterogeneous groups of adolescents in three different settings, experiencing a variety of severe and persistent and mental and behavioral problems, social emotional problems and/or intellectual disabilities or borderline intellectual functioning. Therefore, generalizing the results to other populations internationally with specific special education and care needs should be done with caution. However, this study is a unique contribution to the limited literature on ACEs in the broad population of adolescents with special needs, since it gives insight into three settings providing special education and/or care. Second, these descriptive data were retrieved from case-files in which potentially relevant information may not or may differently be administered by involved professionals. Inherent in this type of data is that there is little knowledge on accuracy and missings. Also, this makes it plausible that there is an underestimation of prevalence rates on ACEs and family risk factors. Third, no associations between ACEs and the mental and behavioral problems that were present (see for a description the methods section) in the study population could be explored, since the variables of the three settings regarding mental health and behavioral problems were not comparable due to different operationalizations. However, it is known that ACEs contribute to a variety of negative health outcomes (Felitti et al., 2019). As ACE research is limited in children and adolescents with special education and care needs, it is important to gain more insight into these associations in follow-up research. Fourth, as was stated in the introduction, the scope of the original framework is limited, which could have led to underexposure of other adversities that may also negatively impact health outcomes. Finally, only ACEs and family risk factors were included in the present study, while protective and compensatory experiences (PCEs) are a powerful predictor of development and health as well, and can promote healthy outcomes and resilience (Burstein et al., 2021). Children's dependence on their environment is high and ensuring safe, stable, nurturing relationships for all children in all settings is key to preventing ACEs and mitigating their effects in the interest of lifelong health (Gervin et al., 2022). For future ACE research we recommend to examine protective and compensatory experiences as well to get a better understanding of developmental trajectories and health outcomes.

Notwithstanding its limitations, the present study has several strengths. First, since ACE research on youth with special care or educational needs is limited (Masseti et al., 2020), this study is a unique contribution to the insights on ACE prevalence in this vulnerable group. Second, the data collections

and operationalizations of the variables in this study were structured and accurate, reflected in good to high inter-rater reliability scores in all three settings. Third, this study contributes to literature since it was the first to describe ACEs in adolescents in three different special needs/care settings, which is exceptional in ACE research since different frameworks are often being used.

Implications

The high prevalence of ACEs in the current sample of adolescents with special educational and care needs underlines the need for increased ACE awareness in education, healthcare, policy and in society in general. When there is insufficient attention for ACEs and their detrimental impact on a wide variety of health outcomes such as social, emotional and cognitive development and subsequent mental and behavioral problems, there is a risk for treating symptoms instead of underlying root causes. By integrating trauma informed approaches such as Trauma-informed care (TIC) or Trauma-informed education, in which past and present positive and adverse experiences are included to understand behavior, and professionals are supported to prevent retraumatization and provide adequate support, appropriate and sustainable education and care can be provided (Thirkle et al., 2021).

The finding that a significant part of the studied population already experienced at least 3 or 4 ACEs at the age of 15, outlines the need for recognition, prevention and early intervention of adverse experiences in children and adolescents. Throughout childhood, together with the first 1000 days in a child's life, puberty constitutes the most active period for the development of different brain networks (Bundy et al., 2018). During both periods, brain development is the most vulnerable. Awareness of consequences of toxic stress resulting from ACEs in relation to brain development and neuroplasticity of key regions controlling cognitive processing and emotion regulation is crucial to stop the negative cycle of ACEs and its impact on overall health as early as possible (Weems et al., 2021).

The relatively large range in number of ACEs within settings, underline that adolescents with special educational and care needs have different individual backgrounds. The emotional and behavioral problems of this vulnerable population are internationally increasingly seen as the result of complex interactions between child and environment (Köhne & Van Os, 2021; Lehman et al., 2017). This demonstrates that the personal life stories, backgrounds and individual educational and care needs of the child and family are an important source of information for personalized, effective and sustainable educational and health care trajectories. To what extent the differences in prevalence of ACEs and family risk factors between settings contributed to the allocation of the adolescents to the specific setting is not examined in the current study. Also, research on the impact of different types of ACEs on development is still ongoing (Miller et al., 2018). What is known is that ACE awareness takes an important place in working with children and adolescents with a developmental, emotional and behavioral problems or disrupted family functioning. Also in the case of relatively mild symptomatology

or dysregulation a close look at the possible underlying presences of ACEs is important with the aim of minimizing long-term and intensive educational and care interventions.

Thus, ACEs are common in children and adolescents with special educational and care needs and therefore it is important to gain insight into possible experienced ACEs during admission and provision of education and/or care. ACE assessment is not yet common in special education and youth care in the Netherlands and there are some contemporary challenges, which call for awareness (Bartlett, 2020; McLennan et al., 2020). These challenges concern for example the uniformity of the framework and determinants to include (Bartlett, 2020; Finkelhor, 2018; Jee & Forkey, 2022; Karatekin & Hill, 2019), the necessary availability of effective interventions during and after screening (Finkelhor, 2018; McLennan et al., 2020) and the absence of valid screening tools (Jee & Forkey, 2022; Meehan et al., 2022). For example, when asking about ACEs professionals must be able to offer adequate interventions and responses to those with positive ACE screening, The right use of ACE screeners depends on the context in which professionals use it. Despite these challenges, having conversations about life history, sources of stress and strengths is key in education and care for both the child, the parent and the professional. Trauma-informed care and trauma-informed education can provide organizations a context to recognize and respond to ACEs in a trauma-sensitive way. Also, the use of a multi-informant perspective (i.e. child, family members, professional) seems important, as different informants can contribute to a more complete picture of the number, type and timing of ACEs (Hambrick et al., 2014; Offerman & Asselman, 2022; Zelechowski et al., 2021). Since ACEs and a lack of protective and compensatory experiences are often part of the child's problems, this should be described in all personal plans and the education and care that is subsequently offered should be trauma-informed, with sensitivity to positive childhood experiences in children and parents (Kan et al., 2020; Narayan et al., 2021).

Conclusion

To date there has been little scientific research on both ACE prevalence and family risk factors in adolescents with special educational and care needs. The current study contributes to limiting this knowledge gap by providing insight into the ACE prevalence of this vulnerable population. The substantial ACE prevalence in our sample of adolescents with special educational and care needs underline the need for early ACE awareness and a trauma-informed perspective in special educational and youth care interventions. When there is insufficient attention for ACEs and their detrimental impact on a wide variety of health outcomes, there is a risk for treating symptoms instead of underlying root causes. Approaches such as Trauma-informed care and Trauma-informed education should be implemented in organizations working with these adolescents and their parents, in which past and present positive and adverse experiences of all involved are included to understand trauma-related

behavior in adolescents and families (Thirkle et al., 2021). Such approaches can prevent retraumatization and support learning and healthy development in vulnerable groups of adolescents with special educational and care needs (Substance Abuse and Mental Health Services Administration [SAHMSA], 2014). In this, a family centered approach should be incorporated as well, given that ACEs regarding household dysfunction and family risk factors are common in adolescents with special educational and care needs. Future research should address the mechanisms through which ACEs and family risk factors affect special educational and care needs. This knowledge can help to mitigate the effects of ACEs and family risk factors in the interest of lifelong health and well-being of both adolescents and their families.

Declarations

Statements and declarations

On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethics approval

Each separate retrospective cross-sectional study protocol was approved by the Ethics Review Board of the University of Amsterdam (residential care center 2018-CDE-8871; special educational setting 2017-CDE-7603; alternative educational facility 2017-CDE-7736). In 2018 a new European law was implemented, which more often obligates active consent for retrospective case-file studies, known as General Data Protection Regulation (GDPR; General Data Protection Regulation, 2016). Since for the alternative educational setting data were collected before GDPR, no active consent was asked for that setting. In the residential care setting active consent to participate and publish was asked for case-files analyzed from the moment GDPR was implemented. The special education setting asked for an active consent from all informants (students, parents, teachers).

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Chapter 6

An intergenerational perspective on Adverse Childhood Experiences and psychotic experiences in patients with psychotic disorder

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Chapter 7

General discussion

Purpose of this dissertation

The overall aim of this dissertation was to advance knowledge on childhood adversity and specifically its pathways to sexual exploitation. Adverse childhood experiences (ACEs) have a cumulative and substantial impact on a wide range of negative health outcomes throughout the lifespan (Afifi et al., 2020; Hamby et al., 2021; Massetti et al., 2020), including mental and physical health problems and behavioral, interpersonal, educational, and economic difficulties (Bright et al., 2016; Portwood et al., 2021). Due to the developmental vulnerabilities of youth, they are particularly endangered to the harmful effects of ACEs. ACEs not only influence the affected individuals but can have profound effects on future generations as well. When adults have experienced ACEs, the likelihood of ACEs in their children increases, due to a complex interplay of biological, psychological and social factors (Lê-Scherban et al, 2018; Schickedanz et al., 2018; Narayan et al., 2017). Breaking the negative cycle of (intergenerational) ACEs is therefore essential to prevent long-lasting negative health consequences, but also additional adversities, such as for example sexual exploitation (Ports et al., 2016).

In this dissertation a specific focus on sexual exploitation was chosen because it is a major societal and hidden problem, that has received too little attention in research, policy and practice. By shedding light on sexual exploitation, this dissertation can raise more awareness on this global issue that has detrimental effects on youth's overall health and well-being. Increased awareness of sexual exploitation and more knowledge on risk and protective factors in youth can lead to better prevention strategies, protection and interventions for at-risk and victimized youth (Franchino-Olsen, 2019). Especially studies on youth who are underrepresented in research (e.g. young men, youth with intellectual disabilities) are critically needed to be able to fill the current knowledge gaps and address their needs effectively (Moss et al., 2023; Reid, 2018). Therefore the first part of this dissertation examined the risk and protective factors for sexual exploitation in young men and in young women, including those with intellectual disabilities. In this a specific focus on ACEs in the pathway to sexual exploitation was explored, because knowledge on risk patterns helps to identify opportunities for early intervention leading to better health outcomes (Madigan et al., 2023).

Despite increased attention to ACEs in research and practice over the past few decades, ACEs continue to be a global concern and their long-term consequences continue to drive up costs for social and healthcare systems (Karatekin et al., 2023). The systematic review of Hughes et al. (2017) demonstrated that research on the prevalence of childhood adversity using the ACE framework has mainly focused on children and adults in the general population, with limited attention to at-risk youth who experience more ACEs (Jones et al., 2012). For a better understanding of the potential role of ACEs in the challenges at-risk youth face, more knowledge is needed on the prevalence of ACEs. Additionally, there is still limited knowledge about the role of intergenerational ACEs in the onset of mental health

problems, for example psychotic disorders (Bolhuis et al., 2022). To address these gaps in research, the second part of this dissertation aimed to deepen our understanding of the prevalence of ACEs in youth with special educational and care needs, as well as the intergenerational effects of ACEs in patients with psychotic disorders.

Overall, this research contributed to a better understanding of risk and protective factors for sexual exploitation, and possible pathways to victimization resulting from ACEs. More knowledge is gained on the prevalence of ACEs and on intergenerational ACEs which help to inform more timely and effective prevention and intervention strategies that help to break the cycle of adversity and long-lasting negative health consequences. The conclusions drawn from this dissertation are detailed below.

Main findings and conclusions of the studies

The cumulation of risk factors for sexual exploitation in youth

By identifying risk and protective factors for sexual exploitation in youth worldwide, the systematic review in **Chapter 2** makes an important contribution to the understanding of vulnerabilities for sexual exploitation. No such overview of risk and protective factors existed, while it clarifies knowledge gaps and targets for prevention and intervention. Many risk factors were identified at the individual, family, community and societal level. ACEs were the most common cited risk factors worldwide, but an important finding was that risk factors may vary depending on cultural, social and economic contexts. Understanding how risk factors may lead to sexual exploitation is complex, because of the large variety in risk factors and the different samples of youth in global research. Therefore we organized risk factors in a theoretical framework, based on existing models that explain risk factors in relationship to sexual victimization (Agnew, 2006; Edwards & Mika, 2017; Franchino-Olsen, 2021). Our theoretical framework explained that risk factors related to negative experiences (e.g., physical abuse and growing up in poverty) may result in negative affect states (e.g., mental health and emotional problems), subsequent maladaptive coping and risk behavior (e.g., running away, substance use or sex work) that increases youth's vulnerability for sexual exploitation. Significant gaps remain in the actual relationships between risk factors, but there are several studies that confirm part of the associations in this theoretical framework. For example, the ACEs parental arrests and parental substance abuse have been found to link to poor nurturing, which led to higher negative psychosocial emotion in their children, running away, substance abuse and sexual relationships at younger age - which are all risk factors for sexual exploitation (Reid & Piquero, 2016). In our systematic review we identified many risk factors but did not study the relationships between risk factors. In **Chapter 3**, however we provided unique insights into the accumulation of risk factors by using a qualitative study design. To our knowledge this is the first study that gave young men a voice in sharing their experiences with sexual exploitation from a life course perspective. The pathways the young men described are in line with our theoretical model;

sexually exploited and at-risk young men described how ACEs and a lack of protective factors resulted in emotional, behavioral and mental health problems and subsequent high-risk situations. Two pathways to sexual exploitation stood out; young men having to survive from day to day and young men involved in online dating and pay dates. In line with literature, societal gender norms and resulting taboos played a significant role in the reluctance of young men disclose victimization and not getting the help they need (Josehans et al., 2019; Moynihan et al., 2018). This study highlights the urgent need that policymakers and practitioners focus on challenging the stigma and taboos these young men experience. For example, by creating more safe spaces and easy accessible (anonymous) help for young men to talk openly about their experiences without fear of judgement or stigma.

Implications. **Chapter 2 and 3** helped framing possible connections between ACEs, subsequent mental and emotional health problems, risk behavior and sexual exploitation. Although these studies did not study causal relationships, the results highlight key points and time frames at which prevention efforts in policy and practice can be aimed (Franchino-Olsen, 2019). At the individual and family level, early trauma-informed and family-based interventions are required when ACEs and other (family) risk factors are identified in young children and their families. This also implies that practitioners and policymakers need to move beyond focusing solely on the outward behavioral problems of youth and instead address the underlying emotional, psychological, and trauma-related vulnerabilities. By supporting caregivers, building resilience in children and addressing their adverse and positive experiences, interventions can promote a safe and stable nurturing environment that buffers against the consequences of ACEs (Merrick et al., 2020). Human traffickers know where to meet youth with vulnerable backgrounds. Therefore, at the community level, outreach and educational efforts are needed in areas with large numbers of at-risk youth (e.g. runaway and homeless youth, youth with school problems, youth with intellectual disabilities, youth in residential and foster care or youth involved in criminality; Nichols, 2018). Educational efforts should focus on raising awareness among at-risk youth, caregivers, and professionals about the tactics traffickers use, and teaching at-risk youth how to recognize and avoid exploitative situations, set boundaries, be safe online and form healthy relationships. At a societal level, policymakers must structurally address issues such as poverty, housing problems and social inequalities to reduce youth's susceptibility to human traffickers (United Nations Office on Drugs and Crime, 2020).

These implications are not only relevant in the context of sexual exploitation, but also in the context of overall youth mental health. Many risk factors for sexual exploitation are risk factors for a wider range of challenges in youth besides sexual exploitation, such as involvement in criminality, suicidality or future mental and physical health problems. When working with at-risk youth and their families it is important to carefully examine their personal histories and the factors that may influence the onset and continuation of their challenges. For this purpose, the 'explanatory analysis'

(Verklarende analyse) is increasingly being used by healthcare professionals in The Netherlands (Tempel et al., 2022). The emphasis of this analysis is on understanding and explaining problems, rather than describing or labeling them, with the aim of achieving more efficient and sustainable treatment choices. A further implementation of the 'Verklarende analyse' in at-risk youth and their families is advised in order to prevent the further accumulation of risk factors and improving their health and well-being.

Protective factors for sexual exploitation

Protective factors can play an important role in mediating the adverse effects of ACEs and reducing the likelihood of a broad range of negative health outcomes (Hays-Grudo et al., 2021). Protective factors have received limited attention in research on sexual exploitation (Landers et al., 2020). Therefore, besides a focus on risk factors, the systematic review in **Chapter 2** focused on the identification of protective factors for sexual exploitation. Our results confirmed that there are large knowledge gaps. Of the 65 included studies, only 10 addressed protective factors. Most of the research was conducted on the protective role of positive and supporting relationships. The importance of positive and supporting relationships was also demonstrated in **Chapter 3**; these relationships helped young men to deal with challenges in their lives, while a lack positive and supporting relationship was often accompanied an accumulation of ACEs. A lack of positive and supporting relationships is associated with a higher likelihood that youth turn to substance use, sexual risky behavior, criminal activities or other risky behavior (Bath, 2008), while the presence of it can buffer children against mental health problems and risky environments (Garner et al., 2021) and can reduce harm after victimization (Nationaal Rapporteur Mensenhandel en Seksueel Geweld tegen Kinderen, 2022). Thus, protective factors are an important, relatively ignored, aspect to address when working with at-risk youth.

That protective factors aren't taken into account enough yet in clinical practice was illustrated by the clinical record study in **Chapter 4** on sexually exploited young women with intellectual disabilities. Initially we aimed to gain insight into the presence of protective factors. However, this was hampered by a lack of data in the clinical records on protective factors. Although in modern healthcare a shift is being made from traditional problem-focused care to more strength-based care, diagnostic systems in practice still rely upon presenting diagnoses, problems and symptoms (Bokhour et al., 2018; Van Os, 2018). Healthcare providers may therefore have a bias towards documenting mainly negative aspects of mental health (Martin et al., 2020). Protective factors should be standardly part of practice in healthcare, because they play an important role in promoting positive development and mental health (Barnová & Tamášová, 2018).

Implications. The important insights of this dissertation can inform health care professionals in practice and policy to incorporate a focus on protective factors in a strength-based prevention and treatment approach. Currently, an operationalization of protective factors is reflected in three conceptual frameworks (Bethell et al., 2019; Morris et al., 2018; Narayan et al., 2018). Morris et al. (2018) for example recommends strategies aimed at facilitating youth and families developing and sustaining significant relationships (e.g. having someone who loves you unconditionally, having a best friend) and providing access to resources (e.g. living in a safe home, getting education; Hays-Grudo et al., 2021; Morris et al., 2018). For example, programs that strengthen family relationships can protect youth in times of stress and unsafety (Lerner et al., 2023). Another way to implement protective factors is establishing community and after school programs where at-risk youth can engage in leisure activities and receive support. Ensuring that at-risk youth have access to mental health services can support them to develop adaptive coping strategies that make them less vulnerable to exploitation. Also, education and employment opportunities can help reduce the risk of exploitation by giving youth the tools they need to achieve financial independence and stability. By prioritizing and integrating protective factors into all aspects of prevention and intervention, a more effective approach to safeguarding at-risk and sexually exploited youth can be created.

Sexually exploited and at-risk young women with intellectual disabilities

Chapter 2 demonstrated that intellectual disabilities are a risk factor for sexual exploitation, but that intellectual disabilities have received limited attention in research. The identified risk and protective factors in **Chapter 2** guided the operationalization of variables in **Chapter 4**. This chapter set more light on the background characteristics of sexually exploited and at-risk girls and young women with mild intellectual disabilities and borderline intellectual functioning in a Dutch specialized treatment centre. This study confirmed the limited and existing evidence on the relatively high prevalences of risk factors for sexual exploitation in youth with intellectual disabilities. An important finding was that many girls had multiple experiences of abuse, neglect, sexual abuse and sexual exploitation. It is known that trauma resulting from childhood sexual abuse or other ACEs can serve as a triggering mechanism for risky behaviors which then result in sexual exploitation (Reid, 2018). The combined vulnerabilities of the extensive histories of ACEs and the cognitive and adaptive limitations may make youth with intellectual disabilities more vulnerable to manipulation, seeking others for validation, impaired judgement of risky situations and poor decision making (Jones et al., 2012; Wissink te al., 2015). Human traffickers are known to act on these vulnerabilities, making youth with intellectual disabilities especially vulnerable to sexual exploitation (Franchino-Olsen, 2020; Reid et al., 2018). The likelihood of experiencing sexual exploitation and sexual violence has been found to be 13 to 18 times higher in youth with intellectual disabilities compared to youth without intellectual disabilities (Nationaal

Rapporteur Mensenhandel en Seksueel Geweld tegen Kinderen, 2022). Despite this risk, a major problem in policy, research and practice is that sexual exploitation in youth with intellectual disabilities is inadequately understood, recognized, recorded and monitored (Franklin et al., 2024). This was concluded in recent reports from the United Kingdom and The Netherlands (Franklin et al., 2024; CoMensha, Koraal and MetaStory, 2023). The Dutch report was a result from national conversations on ‘exploitation and intellectual disabilities’ with 90 organizations working in this field, including the police, municipalities and health care institutions (CoMensha, Koraal and MetaStory, 2023). One issue is that there remain significant gaps in professionals’ knowledge on recognizing both intellectual disabilities and sexual exploitation (Franklin & Smeaton, 2017; Nouwens et al., 2017). The scoping review of Ailey et al. (2024) showed that health care professionals rarely receive specific training in communicating or working with people with intellectual disabilities. Professionals should be equipped with the right knowledge and skills to identify youth with intellectual disabilities, and to address their needs, especially because they make up a significant proportion of youth receiving (specialized) mental health care in The Netherlands (Nieuwenhuis et al., 2017). When intellectual disabilities are not recognized in time and the specific characteristics are not taken into account, this leads to poorer treatment outcomes (Nieuwenhuis et al., 2017). Also, when intellectual disabilities are not recognized at all in youth, this can lead to frustration at school, challenging behavior and exclusion which can heighten their vulnerability to sexual exploitation (Franklin & Smeaton, 2017). Another point of concern in sexually exploited youth with intellectual disabilities is diagnostic overshadowing, which poses a risk of treating symptoms instead of root causes. Research has indicated that behavioral problems of sexually exploited youth with intellectual disabilities are often wrongly attributed to the intellectual disabilities, rather traumatic experiences (Reid et al., 2018). This may also explain the discrepancy in our sample between the prevalence of PTSD (30.9%) and trauma related symptoms (72.7%). Opportunities for effective early intervention and breaking patterns of sexual violence are missed when the symptoms of sexually exploited and at-risk youth with intellectual disabilities are misunderstood (Franklin et al., 2024). All these barriers can allow sexual exploitation to continue or worsen, causing long-term psychological and physical harm. It can reinforce the marginalization that youth with intellectual disabilities often already face.

Implications. An important implication for practice is that the recognition of sexual exploitation and intellectual disabilities must be improved in professionals who may see victims or at-risk youth in their daily work (e.g. general practitioners, health care workers, social workers, teachers, policemen or hotel employees). There are multiple easily accessible e-learnings and advanced training courses for professionals available in The Netherlands. Organizations working with at-risk youth should give their employees the opportunity for these trainings. Professionals working in (mental) healthcare settings should gain more knowledge on the unique cognitive, emotional, and behavioral characteristics of

youth with intellectual disabilities and their needs. When there is a suspicion of intellectual disabilities, screening tools can help to gain a first impression of their cognitive abilities and can provide guidance for more detailed assessment, for example the Screener Intelligence and Learning disability (SCIL; Nijman et al., 2018). Youth with intellectual disabilities should be provided with adequate education on relationships and sexuality that matches their cognitive and adaptive abilities (Franklin & Smeaton, 2017). Learning about forming healthy relationships, how to keep safe online, giving and receiving consent, understanding what grooming and sexual exploitation is, and how to seek help can help improve resilience and prevent exploitation. Furthermore, an implication for policymakers is that they should be made aware of the major issue of sexual exploitation in youth with intellectual disabilities. Financial resources should be allocated for the development of prevention and interventions that protect these youth and are tailored to their specific needs. Future research on sexual exploitation in youth with intellectual disabilities is important to fill the gaps in understanding their specific needs and to develop effective prevention and intervention strategies tailored to these needs.

The importance of early identification of (intergenerational) ACEs

ACEs were substantially present in the studied samples in this dissertation. According to the sexually exploited and at-risk young men in **Chapter 3**, ACEs had a significant role in the challenges they experienced in their life course. **Chapter 4** and **Chapter 5** demonstrated that relatively many sexually exploited and at-risk young women with intellectual disabilities and youth with special educational and care needs experienced multiple ACEs. The cumulative ACE prevalences are worrying because more ACEs are related to more emotional and behavioral health needs and a higher likelihood of extremely poor health outcomes in children and adults (Anda et al., 2006). **Chapter 6** underlined this, by finding that the more severe experiences of ACEs were associated with higher levels of psychotic experiences and general psychopathology in both patients with psychotic disorder and their parents. Moreover, there were indications for intergenerational relationships, as associations were found between ACEs in mothers and severity of psychotic experiences in patients over time. *Implications.* These findings outline the need for intergenerational ACE recognition, prevention and early intervention, especially in children, youth and their parents with vulnerable backgrounds who are at risk for a repeating cycle of adversity. As described in previous paragraphs, an effective response to ACEs entails both minimizing adversity and also building resilience by addressing protective factors in both children and their parents (Narayan et al., 2023). Higher levels of positive experiences are associated with more nurturing parental attitudes and greater well-being in adulthood, during pregnancy and in parenthood, even when there are high levels of ACEs (Bethell et al., 2019; Merrick et al., 2020). Researchers and practitioners are still in the early stages of developing, implementing, and evaluating interventions to ACEs (Portwood et al., 2023), but a growing body of evidence suggests that

trauma-informed care (TIC) is one effective approach (Piotrowski, 2023). It is an organization-wide approach to healthcare, social services, and education, that recognizes and responds to the impact of trauma on individuals from an intergenerational perspective. It involves understanding, recognizing, and responding to the effects of all types of trauma, and emphasizes creating a safe environment that promotes healing and resilience and minimizes the risk of re-traumatization (SAMHSA, 2014). Thereby it focuses on both adverse and positive childhood experiences of both the child and parents.

TIC has been found to contribute to a decrease in behavioral and trauma symptoms of children and adults, treatment time, violent incidents and repressive measures by professionals (Azeem et al., 2011; Boel-Studt, 2017; Piotrowski et al., 2020). Research in adults with intellectual disabilities have shown that TIC can effectively reduce trauma symptoms and can result in a decrease in aggressive behavior and less use of emergency medication (Keesler, 2020; Keesler & Isham, 2017). Professionals experience less stress, indirect traumatization, turnover, better self-care, more cooperation and cost savings are achieved (Piotrowski et al., 2020). The youth care and special educational system is a field in which the application of TIC can be of great value, because this dissertation shows that ACEs are relatively common among the at-risk youth who are involved in these systems. In the Netherlands, there is increasing attention to TIC in healthcare and education. The first organizations are implementing TIC and monitor and evaluate its outcomes in pilot research. TIC has been recommended in literature on sexual exploitation (Reid et al., 2018) as well as in the broader literature on at-risk youth populations (Portwood et al., 2021; Thirkle et al., 2021). Future research should shed more light on the effectiveness of the implementation of TIC in these at-risk youth in The Netherlands. By gaining more insight into effective trauma-informed practices, professionals can better recognize the signs of ACEs early on, which allows for timely intervention and can better understand how to effectively strengthen protective factors that are crucial for building resilience in at-risk youth.

Strengths and limitations

This dissertation has several strengths. Research on sexual exploitation is limited, while it is increasingly being recognized as a major societal issue. Addressing this issue in **Chapter 2, 3 and 4** makes an important contribution to the scientific understanding of risk and protective factors and further development of prevention and intervention strategies. Moreover, **Chapter 5** is the first to study ACE prevalences in a sample with special educational and care settings and **Chapter 6** is one of the first studies on intergenerational ACEs in patients with psychotic disorders and their parents. Another strength was that structured and accurate methodologies were used in this dissertation aiming to ensure objectivity. This was reflected in strong inter-rater reliabilities in **Chapter 2** and **Chapter 5**. Also, **Chapter 2** followed the PRISMA guidelines and included a quality appraisal, which is not common in research on sexual exploitation. **Chapter 4** and **5** used codebooks in which variables were

conceptualized from scientific literature, leading to structured and theory-based frameworks to collect data. The qualitative study in **Chapter 3** made use of an advisory board aiming to ensure objectivity, clinical relevance and safety of the participants. **Chapter 3** is the first study that gave young men a voice in sharing their experiences with sexual exploitation from a life-course perspective. Including the perspective of youth themselves is vital to gain in-depth insights into the accumulation of risk factors and their personal needs. Without them sharing their experiences, certain knowledge gaps would still exist. Future research in collaboration with youth is strongly recommended.

There are also several limitations throughout the chapters, that should be considered while interpreting the findings from these studies. Research on sexually exploited youth include heterogeneous samples and this was also the case in this dissertation. In the systematic review in **Chapter 2**, studies involved youth from varying backgrounds and no insight was gained into the extent that these factors apply different youth. Even in **Chapter 3** on sexually exploited and at-risk young men we cannot speak of a homogeneous sample, because every participant had a unique combination of risk factors. This seems to be an inevitable challenge in research on sexual exploitation as a result of the complex interactions of individual, family and community risk factors. Also, our study designs did not make it possible to make definitive statements about interconnectedness of risk and protective factors or comparisons between subgroups. Despite these limitations, by using theoretical frameworks we were able to identify *possible* pathways to sexual exploitation that makes an important contribution in targeting points for prevention and intervention in different samples of at-risk youth. Future research using larger samples should gain more knowledge on causal relationships in these pathways, but the hidden nature of sexual exploitation keeps up the challenge to use such study designs. Another limitation is that **Chapter 4** and **5** used data from clinical records. Inherent in this type of data is that potentially relevant information may not or may differently be administered by the different involved professionals. This makes it plausible that there is an underestimation of prevalence rates. Yet, this research method has its benefits because youth are indirectly involved and they are not burdened during data collection. Furthermore, in this dissertation we used the original ACE framework existing of 10 ACEs because of the clear operationalization in scientific research and the availability of data on these specific ACEs. This may have led to an underexposure, because we did not focus on recently recommended expanded ACEs. Unfortunately, a clear definition of these expanded ACEs is still lacking and are not included in instruments. For example, the Child Trauma Questionnaire (CTQ; Bernstein et al., 2013) used in **Chapter 6** only includes 5 ACEs on abuse and neglect. Lastly, although this dissertation tried to incorporate a focus on protective factors, actual data on protective factors was lacking (**Chapter 2, Chapter 4**). This large gap regarding protective factors in ACE and sexual exploitation research should be prioritized, because protective factors are key in preventing ACEs, mitigating their effects and to prevent short and long term adversities.

Future research

The last decades of ACE research has provided a growing evidence for the role of ACEs in a wide range of negative (mental) health outcomes across the lifespan. Efforts to study intergenerational ACEs and the interplay with protective factors have just begun (Narayan, 2023). Focusing only on risk factors provides an incomplete picture of how ACEs influence youth and their families. Protective factors, such as positive relationships, stable home environments, and access to mental health resources, play a crucial role in fostering resilience, positive outcomes and the prevention of re-victimization. Studying protective factors alongside risks can reveal strategies to for (preventive) interventions that improve the well-being of at-risk youth and their families (Karatekin et al., 2022). We therefore advocate to incorporate a focus on protective factors alongside risk factors in future intergenerational research on at-risk youth and their families and in sexually exploited youth. As described in the introduction of this dissertation, the ACE pyramid is a widely used conceptual model that illustrates how ACEs can predict later (mental) health outcomes (Centers for Disease Control and Prevention, 2021; Felitti et al., 1998). In response to the ACE pyramid model, Morris et al. (2021) have argued for a model that literally turns ACEs upside down and focus on how protective factors counteract the negative impact of ACEs (see Figure 1). These models can guide urgently needed future research on the interplay between risk and protective factors for youth and adult mental health and their role in the risk for sexual exploitation.

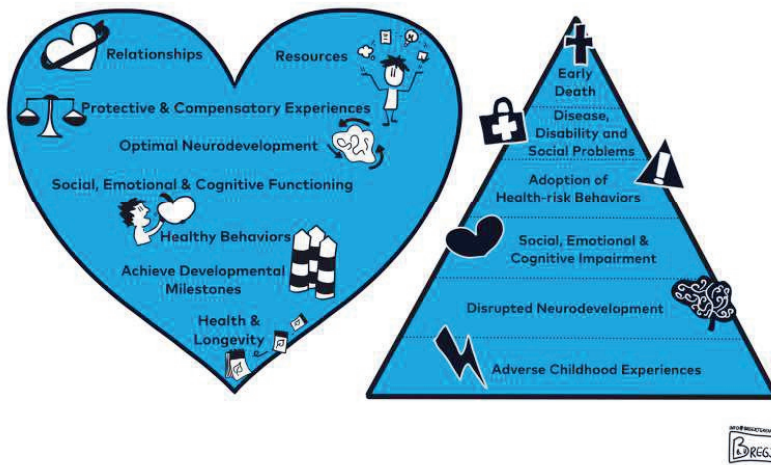


Figure 1. The heart model (left; read from top to bottom) argues that if children have nurturing relationships and the resources to grow up, protective experiences as well as secure attachment and healthy development increase. This leads to healthy behavior and maintenance of positive relationships. The ACE Pyramid (right, read from bottom to top) depicts how may lead to social, cognitive, and emotional impairments, which then lead to health-risk behaviors, which lead to disease, disability, and social problems, which then result in death. Freely translated to The ACE Pyramid (Centers for Disease Control and Prevention, 2021) and The Heart Model (with permission of the authors)

Regarding sexual exploitation, this dissertation made an important contribution to the knowledge on risk and protective factors. It is a logical expectation that at-risk youth with different backgrounds also have different needs in care and support. For example, this dissertation showed that societal gender norms were a major issue in sexually exploited young men and that vulnerabilities related to cognitive and adaptive limitations were substantially present in youth with intellectual disabilities. Needs of young men varied from challenging stigma and anonymous support to peer-to-peer support and specialized therapy, while needs of youth with intellectual disabilities were mostly concerned with trauma treatment and education on personal boundaries, and healthy relationships. This implies that future research should gain more insight on the specific needs of at-risk and sexually exploited youth from different backgrounds. Only with this knowledge, prevention and intervention efforts can be accommodated to their unique needs. This is much needed, because there is a worldwide lack of evidence-based screening tools, specialized prevention and treatment programs to identify and treat sexually exploited young men (Greenbaum, 2014; Moss et al., 2023). Also, there is limited research on the treatment of victims with intellectual disabilities (Reid et al., 2018). Although TIC and adapted versions of empirically supported therapies such as EMDR and CBT have been recommended, more

research is needed to establish an evidence base of treatment options.

There are multiple methodological challenges around sexual exploitation, in large part because victims often remain under the radar. Quantitative research using experimental and longitudinal designs is limited due to the hardship to include large homogeneous sample sizes. Yet, efforts should continue to be made for quantitative research because these study designs can contribute to fill the knowledge gaps around the understanding of relationships between risk and protective factors, sexual exploitation and consequences on overall health in the short and long term. Global research initiatives, such as ‘The Global Boys Initiative’ of ECPAT International (ECPAT, s.d.), can bring organizations together to create opportunities for more large-scale studies. However, qualitative research is certainly of added value to gain more insight into experiences of sexually exploited youth and their needs (e.g. **Chapter 3**). Qualitative research is of significant added value in studying sexual exploitation because it allows for a deeper understanding of the lived experiences, emotions, perspectives and personal needs of victims, which are often difficult to capture through quantitative methods alone. The use of qualitative designs in future research on the needs of at-risk and victimized youth is recommended to integrate the voice of youth themselves. It enables researchers to uncover unique insights into how they perceive risk, and the support systems around them, which might not be easily quantifiable but are crucial for developing effective interventions and policies.

Concluding remarks

In the Netherlands, sexual exploitation and other forms of human trafficking, have been described as a ‘multi-headed monster’ by people in policy and practice. This because of its hidden nature and combatting this issue is something we can only do together. Because the large variety in risk factors at the individual, family and community level, at-risk youth interact with professionals in a wide variety of domains. Thus, working cross-domains (medical healthcare, mental healthcare, education, social work, criminal justice, policy) on prevention and intervention is crucial to safeguard youth to this major issue. A multidimensional approach in the identification of ACEs is needed as well. By working together it becomes easier to identify early signs of ACEs in youth and their families, and to ensure that all facets of their health that are affected by ACEs are addressed. One key message of this dissertation to professionals working with these at-risk youth is to look beyond observable behavior and instead address the underlying emotional, psychological, and trauma-related vulnerabilities through trauma-informed practices. To conclude, this dissertation substantiated that addressing (intergenerational) ACEs is crucial in the context of sexual exploitation (**Chapter 2, 3 and 4**), special educational and care needs (**Chapter 5**) and psychotic experiences in patients and their parents (**Chapter 6**).

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Addendum

Impact paragraph

Summary

Nederlandse samenvatting

About the author

Publications

Dankwoord

Impact paragraph

Aim and main conclusions

The consequences of Adverse childhood experiences (ACEs) on youth's mental and physical health and future well-being have shown to be detrimental. The overall aim of this dissertation was to advance knowledge on (intergenerational) childhood adversity, and specifically its pathways to sexual exploitation in youth.

The studies in this dissertation revealed that ACEs are common in sexually exploited youth and at-risk youth (including youth with special care and educational needs) with and without intellectual disabilities. ACEs have been widely linked to a range of mental health disorders, including anxiety disorder, depression, post-traumatic stress disorder (PTSD) and psychotic disorder (McKay et al., 2021). This dissertation focused on psychotic disorders and found relationships between the severity of ACEs and psychotic experiences in both patients with psychotic disorders and their parents. Results provided indications of the intergenerational impact of childhood adversity. These insights substantiate the need that professionals working with at-risk youth and their families are aware of ACEs (e.g. general practitioners, pediatricians, social workers, psychologists, teachers, community care workers, policemen). The earlier ACEs are identified and addressed, the higher the chances may be to prevent long-lasting negative health consequences, and additional adversities such as sexual exploitation (Thompson et al., 2014; Webster, 2022). This also benefits societal costs, for which ACEs are a significant contributor (Hughes et al., 2021; Karatekin et al., 2022).

This dissertation specifically focused on sexual exploitation because it is a major societal and hidden problem that has received too little attention in research, policy and practice. Important insights were gained on risk and protective factors for sexual exploitation, and how ACEs may trigger a chain of other risk factors, mental health problems, risk behavior and ultimately circumstances in which at-risk youth are vulnerable to be sexually exploited. This knowledge can inform future research that aims to further elucidate these potential pathways to sexual exploitation. It also highlights key points and time frames in the lives of at-risk youth and their families at which prevention efforts can be aimed. This dissertation identified a significant gap in research and practice regarding protective factors. It underlines the critical need for a better understanding of how protective factors can mitigate the impact of risk factors, so that researchers and practitioners can incorporate more strength-based prevention programs and interventions into the existing risk reduction strategies.

Relevance

Today, the topic sexual exploitation is of increasing relevance. Globally there is growing attention in research, policy and practice to the complex issue of sexual exploitation. Studies have revealed the

widespread nature of sexual exploitation, affecting millions of people worldwide (The International Labor Organization, 2017), in particular at-risk and marginalized youth, such as youth with intellectual disabilities and young men (Moynihan et al., 2018; Reid, 2018). This has led to the conclusion that the ‘hidden crime’ of sexual exploitation is more common than previously thought. Regularly, newspapers headline about both sexual and criminal exploitation and how it manifests itself in all domains of society (e.g. online, the streets, in hotels, neighbourhoods, around schools and health care centres). Addressing sexual exploitation by prevention and intervention strategies has become a critical issue on governmental agendas, for example the action plan of the Dutch program ‘Together against Human Trafficking’ (Samen tegen Mensenhandel; Rijksoverheid, 2024). To be able to develop and enrich prevention and intervention strategies, knowledge gaps have to be filled. This dissertation makes an important contribution by increasing knowledge on risk and protective factors for sexual exploitation and including at-risk and marginalized youth (youth with intellectual disabilities and young men), for whom timely and adequate care and support is crucial to prevent long-term consequences on their health.

This dissertation focused on risk and protective factors for sexual exploitation at the individual, family, community and societal level. Also the ACE framework emphasizes the importance of addressing the broader context that give rise to ACEs, such as family level and society level risk factors (Karatekin et al., 2022). Thereby this research aligns with current movements in healthcare that seek to explain behavior from a more holistic perspective. In the last decades, healthcare is shifting from disease-oriented care to more personalised patient and family centred care (Bokhour et al., 2018). There is also a growing emphasis for someone’s strengths and personal needs, rather than only on problems, risks and pathologies (Schlechter et al., 2019; Stancliffe et al., 2020). Mental health problems are the result of complex and dynamic biological, social and psychological interactions, it is thus important that an individual is seen within the broader context of functioning, its family and environment (Köhne & Van Os, 2016; Van der Stel, 2020). The results of this dissertation imply that taking history of the personal life of at-risk youth and their parents, including both adverse and positive experiences, can provide important information for the understanding of behavioural root causes. This knowledge can help to implement trauma-informed and strength based (early) interventions, that meet the personal needs of youth and their families. Ultimately, this can lead to more sustainable health outcomes.

Target audience

ACEs and sexual exploitation are societal challenges, making the results of this dissertation relevant to a broad audience. At-risk youth interact with professionals in a wide variety of domains, so the results are of importance for people working in medical healthcare, mental healthcare, education, social

services, family support, education, child welfare and protection, criminal justice and community care and youth organizations. A key message of this dissertation to these professionals is to look beyond observable behavior of at-risk youth and their families and instead recognize and address underlying emotional, psychological, and (intergenerational) trauma-related vulnerabilities through trauma-informed care (TIC). It is critical that the results reach professionals working with these at-risk youth and their families (see also 'dissemination of knowledge'). We call on policymakers involved in healthcare and safety to invest in trauma-informed prevention and intervention strategies, because when professionals adopt trauma-informed practices, they can better understand and respond to the behavioral, emotional, and psychological needs of at-risk youth and their families (SAMHSA, 2014). Youth's chances of re-traumatization can be reduced, and professionals can help to create environments that promote healing, resilience, and positive outcomes, which prevent a wide range of negative health problems across generations and can finally reduce societal costs. So the knowledge dissemination of this dissertation to professionals should ultimately benefit at-risk youth and their families, making them an important target audience as well. Youth with intellectual disabilities and sexually exploited young men are a specific target audience, because the knowledge about their backgrounds characteristics and needs can help to reduce stigma and meet their specific needs. Both groups for example need services that approaches them without judgement, but also are sensitive and provide comprehensive education about sexuality, consent, boundaries and healthy relationships. In order to truly match care and support to the needs of at-risk youth and their families, it is recommended that they be involved in initiatives to implement this knowledge into prevention and intervention efforts. For an example on how this can be achieved, see the next paragraph.

The findings of this dissertation have led to implications and recommendations for researchers. Many knowledge gaps remain regarding pathways to sexual exploitation that can be addressed in future research. Researchers should shed more light on the nature of protective factors for sexual exploitation, the interconnectedness between risk and protective factors and needs of underrepresented at-risk populations. Understanding how certain youth and families maintain healthy despite a history of ACEs is critical for developing interventions that foster resilience across generations. Also more research is needed on the intergenerational effects of ACEs in mental health disorders, to uncover the mechanisms through which trauma is passed down. In addition, more profound qualitative research is needed to give at-risk and victimized youth a voice, to significantly enrich the scientific and practical field. Last, the perspective of parents should be included in research on ACEs and sexual exploitation, because of the possible intergenerational effects of their own ACE histories on ACEs and mental health in their children, but also because parents can play an important role in mitigating adversity and promoting strengths.

Dissemination of knowledge

To reach the above described target groups, the following activities have already been conducted.

Results of this dissertation were shared internationally and nationally with many colleagues in research and practice and with policymakers. Internationally, the results of this dissertation were published in scientific journals (Mercera et al., 2024a; Mercera et al., 2024b; Mercera et al., 2024c). Results were also shared at the International Society for the Study of Behavioural Development (ISSBD) conference in 2024 (Lisbon); the European Congress of Psychiatry in 2024 (Budapest); the European Scientific Association on Residential and Family Care for Children and Adolescents (EuSARF) in 2023 (Brighton); the WPA World Congress of Psychiatry in 2023 (Vienna) the European Society for Child and Adolescent Psychiatry (ESCAP) conference in 2022 (Maastricht); the International Association for the Scientific Study of Intellectual and Developmental Disabilities (IASSIDD) conference in 2021 (Virtual).

Nationally, results were disseminated at the NvVP 'Voorjaarscongres' in 2024 (Maastricht); Jeugd in Onderzoek congress in 2024 ('s Hertogenbosch); MHeNs research day in 2023 (Maastricht); Jeugd in Onderzoek congress in 2022 ('s Hertogenbosch). A guest lecture on sexual exploitation was held for students at 'Fontys Hogeschool voor de Pedagogiek' in 2023 (Sittard). In addition, study results were presented via webinars for (prospective) healthcare and education professionals for the association 'European Association for Forensic Child & Adolescent Psychiatry, Psychology & other involved professions – The Netherlands' (Efcap-nl) in 2022 and 'Avans Hogeschool' in 2021. Policymakers of the Ministry of Justice and Safety and the Ministry of Health, Welfare and Sports were informed in 2022 and 2023 on the study on sexual exploitation in young men so that the results could inform their action plan 'Together against human trafficking' (Rijksoverheid, 2024). Practical factsheets resulting from the studies on sexual exploitation were shared with a wide range of professionals in different domains through knowledge institutes such as 'Landelijk Kenniscentrum LVB', 'Centrum Seksueel Geweld', 'Coördinatiecentrum tegen Mensenhandel' and 'Nederlands Jeugdinstituut'. The results also contributed to the realization of a book chapter about exploitation and intellectual disabilities in a study book for social workers (Basisboek LVB voor sociaal werkers; Kaal et al., 2022). A broader public was reached through an interview in the newspaper 'Algemeen Dagblad' on the sexual exploitation of young men (<https://www.ad.nl/binnenland/mannen-worstelen-vaak-in-eenzaamheid-na-misbruikervaring-mijn-hulpverleners-heeft-me-gered~abef5e65/>). One of the victimized young men participated in the interview as well, to help raise public awareness for this major societal issue.

Currently, the knowledge of this dissertation is being used to further develop prevention and intervention initiatives. One prevention initiative is the project of a consortium of healthcare organizations in The Netherlands (Koraal, Fier, Sterk Huis, Lumens, Pretty Woman/Best Man). In this project an e-learning for professionals is being developed on the sexual exploitation of young men,

aiming to increase professional's knowledge and skills to adequately support them. Also a platform for young men is going to be developed to inform them about sexual exploitation and accessible ways to ask and seek help. In this we collaborate actively with sexually exploited young men to assure that the information is appealing and the platform matches their needs. In another project of Koraal on exploitation and intellectual disabilities, the voice of youth and their parents are included as well, by asking them about their needs. Insights will be translated to practical handouts for professionals, including for example ways to engage in conversation with youth and parents about suspected exploitation. Regarding interventions, the residential and outpatient treatment program for youth with intellectual disabilities of Koraal (YIP!) will be further developed using the results of this dissertation.

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Summary

The overall aim of this dissertation was to advance knowledge on (intergenerational) childhood adversity, and specifically its pathways to sexual exploitation in youth. In the introduction in **Chapter 1**, a theoretical background is provided on adverse childhood experiences (ACEs), the intergenerational transmission of ACEs and sexual exploitation. ACEs have been widely linked to a range of mental health disorders, including psychotic disorders. ACEs seem to be an important target for intervention, as they appear to be intergenerationally transmitted. **Chapter 1** explained that breaking the negative cycle of (intergenerational) ACEs is essential to prevent long-lasting negative health consequences, but also additional adversities, such as for example sexual exploitation. The global issue of sexual exploitation has received too little attention in research, policy and practice. Therefore, the first part of this dissertation examined the risk and protective factors for sexual exploitation in young men and in young women, including those with intellectual disabilities. The second part aimed to improve our understanding of the prevalence of ACEs in youth with special educational and care needs, as well as the intergenerational effects of ACEs in patients with psychotic disorders.

The systematic review in **Chapter 2** provided an overview of both risk and protective factors for sexual exploitation in male and female youth worldwide. Many risk factors were identified at the individual, family, community and societal level. ACEs were the most common cited risk factors worldwide. The identified risk and protective factors were organized in a theoretical framework, which explained that risk factors related to negative experiences (e.g., physical abuse and growing up in poverty) can result in negative affect states (e.g., mental health and emotional problems), subsequent maladaptive coping and risk behavior (e.g., running away, substance use or sex work) that increases youths vulnerability for sexual exploitation. Positive and supportive relationships were found to be an important protective factor that mitigate the risk of sexual exploitation. Yet, research on protective factors is still limited. This systematic review can guide practice and policy in the establishment of more targeted prevention and intervention efforts, and areas to address in future research. Future research on the interconnectedness between risk factors, protective factors and sexual exploitation must contribute to a deeper understanding of potential pathways to sexual exploitation and ways to intervene in these pathways on behalf of youth mental health.

Sexually exploited young men are prevalent, yet underrepresented in clinical practice, policy and research. **Chapter 3** provided unique insights into the background characteristics and needs of sexually exploited and at risk young men. To our knowledge this is the first study that gave young men a voice in sharing their experiences with sexual exploitation from a life course perspective. This study revealed

that several vulnerabilities (e.g. childhood abuse and neglect, household dysfunction, social rejection, running away, substance use) and a lack of positive and supportive relationships led young men into high-risk situations. Among these situations were involvement in pay dates, criminality and having to survive from day to day. Overall, ACEs seemed to have a significant role in the pathways to sexual exploitation. Another important result was that prevailing gender norms and experiences of stigmatization were often a barrier in young men to express vulnerabilities and to disclose victimization. These results urge the need to challenge the taboos young men often experience. Results also demonstrated that there was a wide variety in support needs, including peer-to-peer support, therapy, support with day-to-day practices and anonymous support. To date there is a lack of interventions that specifically address the needs of at-risk and sexually exploited young men, so further development of interventions tailored to their needs is needed.

Chapter 4 gained more insight into the background characteristics and health care needs of sexually exploited and at-risk girls and young women with mild intellectual disabilities and borderline intellectual functioning, who received care in a specialized treatment programme in The Netherlands. It is known that girls and young women with intellectual disabilities are at elevated risk to become victims of sexual exploitation, but research is limited. This retrospective clinical record study demonstrated that vulnerabilities related to cognitive and adaptive limitations, mental health problems and risk behavior were highly prevalent. The mean number of ACEs was 3.1 and 40% experienced at least 4 ACEs. Compared to ACE research in the general population, these numbers are substantial. The combined vulnerabilities of the extensive ACE histories and the cognitive and adaptive limitations may make them more vulnerable to sexual exploitation. Results imply that these girls and young women must be provided with adequate education on concepts like consent, personal boundaries, and healthy relationships. Furthermore, to prevent diagnostic overshadowing, the recognition of intellectual disabilities, sexual exploitation and trauma-related symptoms is crucial in professionals who may see these at-risk youth in their daily work.

In summary, **Chapters 2, 3 and 4** identified a wide range of risk and protective factors for sexual exploitation in youth. ACEs seem to play a significant role in the risk for sexual exploitation. This underlines the importance of early ACE identification in at-risk individuals, which was the focus of the second part of this dissertation.

The study in **Chapter 5** provided insight into ACE prevalence and family risk factors in at-risk youth (10–18 years old) from three Dutch special educational and care settings. A substantial proportion of the adolescents in all settings experienced at least one ACE, with 69.5% in adolescents in special education,

84.9% in residential care and 95.1% in an alternative educational setting. Family risk factors were relatively common, among which a limited social network in all settings (20–50%). The cumulative ACE prevalences are worrying because more ACEs are related to more health care needs and a higher likelihood of extremely poor health outcomes. This research implies that trauma-informed care and education are needed to adequately understand trauma-related behaviors and to enhance learning and healthy development in youth. Given that ACEs regarding household dysfunction and family risk factors seem to be common, family centered approaches should be implemented as well in the interest of lifelong health and well-being for both adolescents and their families.

Chapter 6 further addressed the role of the family in the context of ACEs. This Dutch longitudinal multicenter study explored the intergenerational relationship between ACEs and psychotic experiences in patients with psychotic disorders and ACEs and psychotic experiences in their parents. The sample included a subset of patients (N = 144; 30.6% female; mean age = 25.0) with available data on ACEs and psychotic experiences of their parents. Significant correlations were found between ACEs in mothers (physical abuse) and ACEs in patients (emotional and sexual abuse). Severity of psychotic experiences in parents was significantly correlated with more severe ACEs experiences in patients. Path model analyses revealed that ACEs were associated with more severe psychotic experiences in both parents and patients. Furthermore, ACEs in mothers were associated with increased severity of psychotic experiences in patients over time. This study found indications for the intergenerational relationship between ACEs and psychotic experiences. It implies that addressing ACEs and psychotic experiences in both patients and in parents is essential for breaking the intergenerational cycle of ACEs, benefiting not only patients but also promoting family well-being and healthier future generations.

In summary, this dissertation substantiated that addressing (intergenerational) ACEs is crucial in the context of sexual exploitation (**Chapter 2, 3 and 4**), special educational and care needs (**Chapter 5**) and psychotic experiences in patients and their parents (**Chapter 6**).

Finally, **Chapter 7** presents a discussion of the main findings, strengths and limitations and implications for future research and clinical practice. It concludes that taking history of the personal life of at-risk youth and their parents, including both adverse and positive experiences, can provide important information for the understanding of behavioral root causes.

The knowledge of this dissertation can help to implement trauma-informed and strength based (early) interventions, that meet the personal needs of at-risk youth and their families. Ultimately, this can lead to more sustainable health outcomes.

Nederlandse samenvatting

Het overkoepelende doel van dit proefschrift was om de kennis te vergroten over (intergenerationele) ingrijpende jeugdervaringen (adverse childhood experiences; hierna ACEs) met een specifieke focus op de totstandkoming van seksuele uitbuiting bij jongeren. De introductie (**Hoofdstuk 1**) geeft een theoretische kader rondom ACEs, de intergenerationele overdracht van ACEs en seksuele uitbuiting. ACEs worden in verband gebracht met een breed scala aan psychische stoornissen, waaronder psychotische stoornissen (McKay et al., 2021). ACEs zijn een belangrijk aangrijpingspunt voor preventie en interventie, omdat ze intergenerationeel worden doorgegeven (Bolhuis et al., 2022; Narayan et al., 2017). Hoofdstuk 1 onderstreept het belang dat het doorbreken van de vicieuze cirkel van (intergenerationele) ACEs essentieel is om langdurige negatieve gezondheidsproblemen te voorkomen, maar ook om toekomstige ingrijpende ervaringen op korte en lange termijn, zoals seksuele uitbuiting, te voorkomen. Seksuele uitbuiting is een wereldwijd maatschappelijk probleem, maar heeft nog te weinig aandacht gekregen in onderzoek, beleid en praktijk. Daarom richtte het eerste deel van dit proefschrift zich op risicofactoren en beschermende factoren voor seksuele uitbuiting bij jeugdigen, inclusief jeugdigen die functioneren op het niveau van een licht verstandelijke beperking. Het tweede deel van dit proefschrift had als doel om meer inzicht te krijgen in de prevalentie van ACEs bij jeugdigen met speciale onderwijs- en zorgbehoeften, evenals de intergenerationele effecten van ACEs bij patiënten met psychotische stoornissen.

De systematic review in **Hoofdstuk 2** gaf een overzicht van risicofactoren en beschermende factoren voor seksuele uitbuiting bij jeugdigen wereldwijd. Er werden veel risicofactoren geïdentificeerd op individueel, gezins-, omgevings- en maatschappelijk niveau. ACEs waren wereldwijd de meest voorkomende risicofactoren. De risico- en beschermende factoren zijn geordend in een theoretisch kader, dat uitlegt dat ingrijpende ervaringen (bijvoorbeeld fysieke mishandeling en opgroeien in armoede) kunnen leiden tot mentale gezondheidsproblemen (zoals psychische en emotionele problemen). Dit kan vervolgens leiden tot ongezonde copingstrategieën en risicovol gedrag (bijvoorbeeld weglopen, middelengebruik of het hebben van seks tegen betaling), hetgeen de kwetsbaarheid voor seksuele uitbuiting vergroot. Positieve en ondersteunende relaties bleken een belangrijke beschermende factor te zijn, die het risico op seksuele uitbuiting kan verkleinen, maar onderzoek naar beschermende factoren is nog beperkt. Deze systematic review kan bijdragen aan de ontwikkeling van passende preventie- en interventieprogramma's, en geeft richting aan vervolgonderzoek. Toekomstig onderzoek moet bijvoorbeeld inzicht verschaffen in de onderlinge samenhang tussen risicofactoren, beschermende factoren en seksuele uitbuiting. Deze kennis kan bijdragen aan een beter begrip van de mogelijke wegen naar seksuele uitbuiting.

Seksuele uitbuiting onder jongens en jonge mannen komt voor, maar tot op heden is er weinig aandacht voor hen in onderzoek, de klinische praktijk en beleid rondom seksuele uitbuiting. **Hoofdstuk 3** gaf unieke inzichten in de achtergrondkenmerken en behoeften van seksueel uitgebuite jonge mannen, en jonge mannen die een verhoogd risico lopen. Dit onderzoek liet zien dat verschillende kwetsbaarheden (zoals fysieke mishandeling, emotionele verwaarlozing, ouder-kind relatieproblemen, sociale afwijzing, weglopen, middelengebruik) en een gebrek aan positieve en ondersteunende relaties, ervoor zorgden dat jonge mannen in risicovolle situaties terecht kwamen. Voorbeelden van deze situaties waren onder andere betrokkenheid bij criminaliteit, betaalde seksafspraken en het dagelijks moeten overleven door een gebrek aan basisbehoeften. ACEs leken een belangrijke rol te spelen in de totstandkoming van seksuele uitbuiting. Een ander belangrijk resultaat was dat maatschappelijke gendernormen en stigmatisering vaak een barrière vormden voor jonge mannen om zich te uiten over hun moeilijkheden en om het slachtofferschap te openbaren. Deze resultaten benadrukken de noodzaak om de taboes te doorbreken, waar jonge mannen veelal mee te maken hebben. Er was een grote diversiteit aan ondersteuningsbehoeften, waaronder ondersteuning van leeftijdsgenoten, therapie, hulp bij dagelijkse praktische zaken (zoals geld) en anonieme hulp. Voor zover bekend, is dit de eerste studie die jonge mannen een stem gaf om hun ervaringen met seksuele uitbuiting vanuit een levensloopperspectief te delen. Tot op heden is er een gebrek aan interventies die specifiek gericht zijn op de behoeften van seksueel uitgebuite jonge mannen en jonge mannen die risico lopen. Dit maakt de verdere ontwikkeling van interventies die aansluiten bij hun specifieke behoeften noodzakelijk.

Hoofdstuk 4 focuste zich op de achtergrondkenmerken en zorgbehoeften van seksueel uitgebuite meisjes en jonge vrouwen die functioneren op het niveau van een licht verstandelijke beperking en zwakbegaafdheid. Zij ontvingen zorg in een gespecialiseerd behandelprogramma voor seksueel uitgebuite meisjes en jonge vrouwen in Nederland. Het is bekend dat meisjes en jonge vrouwen functionerend op het niveau van een verstandelijke beperking een verhoogd risico lopen om slachtoffer te worden van seksuele uitbuiting. Onderzoek hiernaar is nog maar beperkt. Deze retrospectieve dossierstudie toonde aan dat kwetsbaarheden gerelateerd aan cognitieve en adaptieve beperkingen, psychische problemen en risicogedrag veel voorkwamen. Het gemiddelde aantal ACEs was 3.1 en 40% had minstens 4 ACEs meegemaakt. Deze cijfers zijn aanzienlijk vergeleken met onderzoek naar ACEs in de algemene populatie. Het meemaken van meerdere ACEs in combinatie met hun cognitieve en adaptieve beperkingen, lijken hen extra kwetsbaar te maken voor seksuele uitbuiting. Ten aanzien van preventie impliceren de resultaten dat deze meisjes en jonge vrouwen voldoende voorlichting moeten krijgen over onderwerpen als wederzijdse toestemming voor seks, persoonlijke grenzen, weerbaarheid en het aangaan van gezonde relaties. Om *diagnostic shadowing* te voorkomen is het van belang dat

professionals die dagelijks met jeugdigen met een kwetsbare achtergrond werken, zowel verstandelijke beperkingen, signalen van seksuele uitbuiting als trauma-gerelateerde symptomen goed kunnen herkennen.

Samenvattend hebben **Hoofdstukken 2, 3 en 4** een brede range aan risicofactoren en beschermende factoren voor seksuele uitbuiting bij jeugdigen in kaart gebracht. ACEs lijken een belangrijke rol te spelen in het risico op seksuele uitbuiting. Dit benadrukt het belang om ACEs vroegtijdig te herkennen bij jeugdigen met een kwetsbare achtergrond. Dit thema stond centraal in het tweede deel van dit proefschrift.

Het onderzoek in **Hoofdstuk 5** bracht de prevalentie van ACEs en risicofactoren in het gezin in kaart bij jeugdigen (10-18 jaar) in drie Nederlandse onderwijs- en zorginstellingen. Een aanzienlijk deel van de jeugdigen had minstens één ACE meegemaakt: 69,5% van de jeugdigen in het speciaal onderwijs, 84,9% in residentiële zorg en 95,1% in een alternatief programma waarin zorg en onderwijs wordt geïntegreerd. Risicofactoren in het gezin kwamen relatief vaak voor, waaronder een beperkt sociaal netwerk (20-50%). De opeenstapeling van ACEs bij deze jeugdigen is zorgwekkend, omdat meer ACEs samenhangen met meer zorgbehoeften en een grotere kans op extreem slechte gezondheidsuitkomsten. Dit onderzoek impliceert dat trauma-informed care en traumasensitief onderwijs nodig zijn om gedrag goed te begrijpen en om het leren en de gezonde ontwikkeling van jeugdigen te bevorderen. Aangezien ACEs ten aanzien van de ACE categorie household dysfunction en risicofactoren in het gezin vaak voorkomen, moeten gezinsgerichte benaderingen worden geïmplementeerd. Dit is in het belang van de gezondheid en het welzijn van zowel de jeugdigen als hun families.

Hoofdstuk 6 richtte zich verder op het gezin in de context van ACEs. Deze longitudinale multicenterstudie in Nederland onderzocht de intergenerationele relatie tussen ACEs en psychotische ervaringen bij patiënten met een psychotische stoornis, en ACEs en psychotische ervaringen bij hun ouders. Er kwamen significante correlaties naar voren tussen ACEs bij moeders (fysieke mishandeling) en ACEs bij patiënten (emotionele mishandeling en seksueel misbruik). De ernst van psychotische ervaringen bij ouders was significant gecorreleerd met ernstigere ervaringen van ACEs bij patiënten. Path model analyses toonden aan dat ACEs geassocieerd waren met ernstigere psychotische ervaringen bij zowel ouders als patiënten. Bovendien waren ACEs bij moeders geassocieerd met een toename van de ernst van psychotische ervaringen bij patiënten in de loop van de tijd. Dit onderzoek vond aanwijzingen voor de aanwezigheid van intergenerationele overdracht tussen ACEs en psychotische ervaringen. Dit impliceert dat het aanpakken van ACEs en psychotische ervaringen bij zowel patiënten

als hun ouders essentieel is om de intergenerationale cirkel van ACEs te doorbreken. Dit komt niet alleen ten goede komt aan de gezondheid van patiënten, maar ondersteund ook gezondere toekomstige generaties.

Samenvattend heeft dit proefschrift aangetoond dat aandacht voor (intergenerationale) ACEs cruciaal is in de context van seksuele uitbuiting (**Hoofdstuk 2, 3 en 4**), jeugdigen met speciale onderwijs- en zorgbehoeften (**Hoofdstuk 5**) en psychotische ervaringen bij patiënten en hun ouders (**Hoofdstuk 6**).

Ten slotte presenteert **Hoofdstuk 7** de belangrijkste bevindingen, de sterke en zwakke punten van dit proefschrift, en de implicaties voor toekomstig onderzoek en de klinische praktijk. Het concludeert dat het in kaart brengen van de persoonlijke levensgeschiedenis, zowel ingrijpende als positieve ervaringen, van jeugdigen en hun ouders belangrijke informatie kan opleveren voor het begrijpen van gedrag. De resultaten uit dit proefschrift kunnen helpen bij het implementeren van trauma-informed care en krachtgerichte (vroegtijdige) interventies, die aansluiten bij de persoonlijke behoeften van jeugdigen met een kwetsbare achtergrond en hun gezinnen. Uiteindelijk kan dit leiden tot duurzamere gezondheidsuitkomsten.

About the author



Gabriëlle Mercera werd op 9 juni 1993 geboren in Drachten, Friesland. Na het afronden van het gymnasium op Het Drachtster Lyceum, verhuisde zij naar Groningen. Aan de Rijksuniversiteit Groningen volgde zij van 2011 – 2015 de bacheloropleiding psychologie. In 2015 verhuisde zij naar Breda, en vanuit daar volgde zij van 2015 - 2016 de masteropleiding “Klinische Kinder- en Jeugdpsychologie” aan Tilburg University. Haar klinische stage en afstudeeronderzoek voerde zij uit bij de organisatie Koraal, locatie De Hondsborg. Daar deed zij ervaring op in het werken met jeugdigen die functioneren op het niveau van een licht verstandelijke beperking en hun gezinnen. Tijdens de stage behaalde zij haar Basisaantekening Psychodiagnostiek (BAPD) en rondde ze haar afstudeeronderzoek naar de groepstraining ‘relationele en seksuele vorming’ af met een 8. Zij heeft haar masterdiploma ‘Met Genoegen’ behaald. Na haar afstuderen kreeg zij een werkervaringsplaats aangeboden bij De Hondsborg op de afdeling psychodiagnostiek. Naast psychologie bleef wetenschappelijk onderzoek haar aantrekken. Na een half jaar werkervaring op doen, kwam zij bij De Hondsborg in dienst als psycholoog en junior onderzoeker. Na 4 jaar in deze functie, begon zij een promotietraject als externe promovendus aan Maastricht University, gesuperviseerd door prof. Thérèse van Amelsvoort, dr. Evelyn Heynen en dr. Sophie Leijdesdorff. Gabriëlle voerde haar promotietraject parttime uit bij Koraal en bleef daarnaast binnen de afdeling Strategie en Kennisontwikkeling van Koraal werkzaam als onderzoeker. Daar deed zij onder andere onderzoek naar de onderwerpen Trauma-informed care (TIC), ingrijpende en positieve jeugdervaringen en leef-, leer- en werkklimaat onder de doelgroep jeugdigen die op het niveau van een LVB functioneren en hun gezinnen. Zij presenteerde haar werk op nationale en internationale congressen en gaf webinars en gastlessen aan opleidingsinstituten en zorgorganisaties. Gabriëlle zet haar onderzoek voort als senior onderzoeker bij Koraal en in samenwerking met Maastricht University.

Gabrielle Mercera was born in Drachten, Friesland, on June 9, 1993. After completing gymnasium at Het Drachtster Lyceum, she moved to Groningen. At the University of Groningen, she attended the bachelor's program in psychology from 2011 - 2015. In 2015, she moved to Breda, and from there she attended the master's program “Clinical Child and Adolescent Psychology” at Tilburg University from 2015 - 2016. She conducted her clinical internship and graduation research at the organization Koraal, location De Hondsborg. There she gained experience in working with youth functioning at the level of mild intellectual disabilities and their families. During the internship, she obtained her

“Basisaantekening Psychodiagnostiek” (BAPD) and completed her thesis on the group training “relational and sexual education” with an 8. She earned her master's degree “Met genoeg”. After graduation, she was offered a work experience position at De Hondsberg in the psychodiagnostics department. In addition to psychology, scientific research continued to attract her. After six months of work experience, she joined De Hondsberg as a psychologist and junior researcher. After 4 years in this position, she started a PhD track as an external PhD student at Maastricht University, supervised by Prof. Thérèse van Amelsvoort, Dr. Evelyn Heynen and Dr. Sophie Leijdesdorff. Gabriëlle carried out her PhD trajectory part-time at Koraal, while continuing to work as a researcher within Koraal's Strategy and Knowledge Development Department. There she conducted research on topics including Trauma-informed care (TIC), adverse and positive childhood experiences and living, school and working climate among among youth functioning at the level of an MID and their families. She has presented her work at national and international conferences and has given webinars and guest lectures to educational institutions and healthcare organizations. Gabriëlle continues her research as a senior researcher at Koraal and in collaboration with Maastricht University.

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