INSTITUTO
UNIVERSITÁRIO
DE LISBOA

Child Maltreatment and Psychopathology in Residential Care: The Moderating Role of Gender

Maria Carolina da Silva Henriques

Master in Community Psychology, Protection of Children and Youth at Risk

Supervisors:
Eunice Magalhães, Assistant Professor
Iscte - Instituto Universitário de Lisboa

Micaela Pinheiro, Researcher
Iscte - Instituto Universitário de Lisboa

June, 2026

CIÊNCIAS SOCIAIS
E HUMANAS

Department of Psychology

Child Maltreatment and Psychopathology in Residential Care: The Moderating Role of Gender

Maria Carolina da Silva Henriques

Master in Community Psychology, Protection of Children and Youth at Risk

Supervisors:
Eunice Magalhães, Assistant Professor
Iscte - Instituto Universitário de Lisboa

Micaela Pinheiro, Researcher
Iscte - Instituto Universitário de Lisboa

June, 2026

To all of you who made this possible.

Acknowledgements

I would like to thank the people who helped me throughout my academic journey and in accomplishing this goal.

To Doctor and Professor Eunice Magalhães, my supervisor, for all the true support, trust and guidance that was given through this process. All of the meetings, suggestions and recommendations contributed to the success of this dissertation. Thank you for always improving my knowledge and my critical thinking, contributing to my personal and professional growth.

To Doctor and Professor Micaela Pinheiro, my co-supervisor, for all the work and contributions to this dissertation. For all the guidance, ideas and encouragement during this process.

To my university colleagues, for all the support and exchange of knowledge, experiences, ideas, and thoughts throughout this long and hard process.

To all of my friends, for being with me through all of these years, for your understanding, support, and, mostly, for all of your kindness.

And finally, I would especially like to express my gratitude to my family and Miguel for their unconditional love, for never doubting me, even when I doubted myself. For encouraging my work, motivating me and supporting my dreams and my academic journey. This accomplishment is as much mine as yours.

This achievement would not have been possible without you.

To all of you, my deepest and sincere gratitude.

Resumo

A investigação sugere que jovens em acolhimento residencial (AR) apresentam mais dificuldades psicológicas (e.g., internalização e externalização) do que os pares, frequentemente relacionadas com experiências prévias de maus-tratos. Além disso, estas dificuldades parecem variar em função do género dos jovens. Assim, esta dissertação tem como objetivos explorar as associações entre abuso e negligência e a psicopatologia em jovens em AR, utilizando uma abordagem multi-informante, bem como analisar o papel moderador do género nestas associações. Este estudo incluiu 155 jovens em casas de AR (12-17 anos, M = 14.89; 57.4% sexo feminino), os seus principais cuidadores em acolhimento e os respetivos técnicos. Os técnicos preencheram o Questionário da Severidade do Mau-Trato e os jovens e os seus principais cuidadores em acolhimento preencheram o Questionário de Forças e Dificuldades. Os resultados revelaram que apenas o abuso físico e psicológico estava relacionado com sintomas de internalização reportados pelos jovens e cuidadores e com sintomas de externalização, reportados pelos jovens. A análise multigrupo revelou efeitos significativos de moderação do género, especificamente ao nível da negligência. Estes resultados fornecem conhecimento adicional acerca do papel do mau-trato no ajustamento psicológico em AR, e em particular acerca das diferenças de género nestas associações. A partir destes dados, refletimos em torno de intervenções baseadas em evidência e dirigidas às necessidades de saúde mental destes jovens, considerando as suas experiências de mau-trato e as diferenças individuais identificadas.

Palavras-Chave: Mau-Trato, Género, Psicopatologia, Acolhimento Residencial, Jovens

Categorias e Códigos de Classificação APA PsycINFO:

2800 – Psicologia do Desenvolvimento

3300 – Saúde e Tratamento de Saúde Mental e Prevenção

Abstract

Research suggests that youth placed in residential care (RC) present more psychological difficulties (e.g., internalizing and externalizing) than their peers, often related to prior experiences of maltreatment. Additionally, these difficulties seem to vary according to youth's gender. Therefore, this dissertation aims to explore the associations between abuse and neglect and psychopathology in youth placed in RC, using a multi-informant approach, as well as to analyze the moderating role of gender in these associations. This study included 155 youth in RC homes (12-17 years old, $M = 14.89$; 57.4% female), their primary caregivers in care and the respective care workers. Care workers completed The Child Maltreatment Severity Questionnaire, and youth and their primary caregivers in care completed The Strengths and Difficulties Questionnaire. The results revealed that only physical and psychological abuse was related to internalizing symptoms reported by youth and caregivers, and to externalizing symptoms reported by youth. The multigroup analysis revealed significant moderating effects of gender, specifically regarding neglect. These findings provide additional knowledge on the role of maltreatment in psychological adjustment in RC, and regarding gender differences in these associations. Based on these findings, we reflect on evidence-based and targeted interventions that meet the mental health needs of these youth, considering their maltreatment experiences and those individual differences.

Keywords: Maltreatment, Gender, Psychopathology, Residential Care, Youth

APA PsycINFO Classification Categories and Codes:

2800 – Developmental Psychology

3300 – Health & Mental Health Treatment & Prevention

Table of Contents

Acknowledgments iii

Resumo v

Abstract vii

Introduction 1

Chapter I. Theoretical Framework 3

1.1. Child Abuse and Neglect and Psychopathology 3

1.2. Gender Differences in Child Maltreatment and in Psychopathology 10

1.3. The Current Study 13

Chapter 2. Method 17

2.1. Participants 17

2.2. Measures 18

2.2.1. Sociodemographic Questionnaires 18

2.2.2. Child Maltreatment Severity Questionnaire (MSQ) 18

2.2.3. The Strengths and Difficulties Questionnaire (SDQ) 19

2.3. Data Collection and Data Analysis 20

Chapter 3. Results 23

3.1. Descriptive Statistics and Correlations for Study Variables 23

3.2. Child Maltreatment and Psychopathology: A Multi-Informant Approach 25

3.3. Child Maltreatment and Psychopathology: The Moderating Role of Gender 27

Chapter 4. Discussion 29

4.1. Limitations and Implications for Research and Practice 36

Conclusion 41

Sources 43

References 45

Appendix 57

Introduction

Young people living in residential care are especially vulnerable to mental health problems (Magalhães & Camilo, 2023), often presenting higher levels of psychopathology, including internalizing and externalizing symptoms (e.g., Li et al., 2019; Moreno-Manso et al., 2023), possibly due to their previous trauma experiences (Collin-Vézina et al., 2011; Magalhães & Camilo, 2023). Child maltreatment, including physical and psychological abuse and neglect, may negatively affect youth's mental health, increasing the risk of internalizing and/or externalizing symptoms (Magalhães & Camilo, 2023; Springer et al., 2003). Moreover, the literature has suggested that the associations between child maltreatment and mental health problems seem to vary according to the type of child maltreatment (e.g., abuse versus neglect) (Magalhães & Camilo, 2023) and the type of informant (i.e., youth's versus primary caregivers' reports) (Cecil et al., 2017; Fisher et al., 2016; Magalhães & Camilo, 2023). However, findings remain inconsistent, which requires further evidence on these relationships based on a multi-informant approach, contributing to a better understanding of youth's mental health (Simão & Nunes, 2026). In addition, research have been suggesting that there are gender differences in the association between child maltreatment and internalizing and/or externalizing symptoms in youth placed in out-of-home care (e.g., Moussavi et al., 2022), however, the moderating role of gender in youth placed in residential care is still not fully understood and, therefore, should be further explored (Magalhães & Camilo, 2023).

Thus, the present study aims to explore the relationship between child maltreatment and psychopathology of youth living in residential care, based on a multi-informant approach (youth, caregivers in care and care workers in care), as well as to analyze the moderating role of gender in the association between child maltreatment and psychopathology. As such, this study may provide theoretical and empirical new insights and clarifications about the relationship between child maltreatment and psychopathology in youth in residential care settings, as well as clarify the moderating role of gender in these associations. Additionally, this study may provide insights and evidence-based recommendations to develop and implement more effective and targeted interventions that meet the mental health needs of these youth.

The present dissertation is organized into four chapters. In the first chapter, a literature review on the existing evidence on the relationship between child maltreatment and psychopathology, including internalizing and externalizing symptoms, will be presented, particularly considering studies with youth placed in residential care. Also, evidence describing

gender differences in these associations will be provided in order to justify the rationale for the current study, as well as the research gaps which this study aims to address. In the second chapter, the study's method is introduced, including the characteristics of the participants, descriptions of the instruments, and the data collection and analysis procedures. The third chapter presents the study's results. The fourth chapter includes a discussion of our findings, strengths and limitations of the study, as well as contributions and implications for theory and practice. Finally, we will provide a conclusion focused on the main findings and contributions of the current study.

CHAPTER I

Theoretical Framework

1.1. Child Abuse and Neglect and Psychopathology

Children and youth have the right to grow up in a family that provides safety and emotional support. However, many children and youth grow up in harmful contexts through exposure to child maltreatment. This phenomenon is extremely common and increases the risk of developing severe lifelong outcomes in children, families and communities (WHO, 2022). There are a lot of definitions and some difficulty in defining child maltreatment, but generally, this concept is used to describe any acts or failure to act from a parent or other caregiver (Calheiros, Silva, & Magalhães, 2021), including any form of physical, emotional, or sexual abuse, as well as experiences of deprivation, neglect, or exploitation that may threaten or jeopardize a child's mental and physical health, development, survival, or dignity (WHO, 2022; 2024).

Diverse subtypes of child maltreatment have been conceptualized (Calheiros, Silva, & Magalhães, 2021; Gilbert et al., 2009). According to these authors, physical abuse refers to the use of physical punitive practices that may injure a child (e.g., hitting or kicking). Psychological/emotional abuse includes acts that may inflict emotional harm, such as making a child feel worthless or threatened (e.g., intimidating, blaming). Neglect is the failure to meet a child's basic needs, such as physical, medical, educational, emotional, or safety needs. These authors (Calheiros, Silva, & Magalhães, 2021) also distinguish physical neglect from psychological/emotional neglect. Physical neglect can be defined as the failure to provide adequate basic care, such as food, hygiene, or medical attention, as well as lack of physical supervision, while psychological/emotional neglect is the inability to meet a child's emotional, psychological, and developmental needs, including the lack of affection, emotional responsiveness, or lack of a secure and responsive environment.

Many youth who lived in residential care have experienced different types of child maltreatment (Åsen et al., 2024; González-Garcia & del Valle, 2021). A recent study showed that approximately 98% of these youth reported at least one type of maltreatment during their childhood (Åsen et al., 2024). Specifically, neglect was the type of maltreatment (before placement) more commonly reported by youth, especially emotional neglect (96%) and physical neglect (87%). In terms of abuse, parental verbal (63.3%), nonverbal emotional abuse (81%), and physical abuse (46%) were also reported. These prevalence rates are somewhat

consistent with those of other studies (e.g., Collin-Vézina et al., 2011), showing that neglect is the most frequently reported type of maltreatment in youth placed in residential care, while physical abuse tends to be less reported compared to emotional forms of maltreatment. Furthermore, it is important to note that most of these situations are interrelated and co-occur, therefore, youth generally experience more than one type of child maltreatment (Descartes et al., 2020).

Several studies have shown that child maltreatment may negatively impact youth mental health, contributing to traumatic stress reactions (Springer et al., 2003). This may influence the development of brain structures important for critical functions and, therefore, compromise healthy functioning during childhood and throughout adulthood (Hostinar & Gunnar, 2013). Specifically, research showed associations between child maltreatment and mental health problems, including internalizing (such as depression, anxiety, somatic complaints, and isolation) and externalizing (such as impulsive and disruptive conduct, and substance use) (Achenbach, 1991; American Psychiatric Association, 2022; Coughlan et al., 2026; Magalhães & Camilo, 2023).

These problems and effects tend to be more prevalent in young people in the Child Protection Services (CPS) (Collin-Vézina et al., 2011), not only because of the exposure to adverse childhood experiences and out-of-home placements or instability (Hong et al., 2022; Maguire et al., 2024), but also because youth have to deal with the developmental challenges typical of their age, increasing their vulnerability to psychological problems (González-Garcia & del Valle, 2021; Jansen, 2010). Additionally, children and youth placed in the most restrictive settings, such as residential care homes, have more behavioral and emotional problems than those placed in other forms of alternative care, such as foster care (Li et al., 2019). Specifically, young people in residential care have a higher prevalence of DSM-V diagnoses (Monette et al., 2025). They also experienced depressive and anxiety disorders (Jozefiak et al., 2016), as well as behavioral problems, such as attention problems and hyperactive and impulsive behavior (Moreno-Manso et al., 2023). A high comorbidity between these mental health problems has also been reported, highlighting the complexity of these youth's mental health needs (Jozefiak et al., 2016; Moreno-Manso et al., 2023).

The relationship between child maltreatment and mental health problems, including internalizing and externalizing, in youth placed in out-of-home care has been widely examined. However, the literature reports inconsistent findings (Magalhães & Camilo, 2023). Research indicates that, although child maltreatment increases the risk of mental health problems, there are different patterns of associations according to the type of child maltreatment (i.e., physical

and psychological abuse, and physical and psychological neglect) and the reporting methods used to assess maltreatment (Magalhães & Camilo, 2023) and psychopathology or the type of informant (i.e., if the measure is completed by youth themselves or by others such as their primary caregivers) (Fisher et al., 2016).

Specifically, research revealed that emotional and/or physical abuse was positively related to internalizing symptoms among youth placed in residential care (Magalhães & Camilo, 2023), such as post-traumatic stress, depression and dissociation (Collin-Vézina et al., 2011). However, only emotional abuse was related to anxiety (Collin-Vézina et al., 2011). Furthermore, research showed that while emotional abuse was the type of child maltreatment most strongly associated with depression and anxious arousal reported by adolescent girls in residential care, physical abuse was less associated with these symptoms (van Vugt et al., 2014).

In addition, physical and/or emotional abuse experiences have been related not only to internalizing symptoms, but also to externalizing symptoms (Magalhães & Camilo, 2023). Specifically, studies indicated that physical abuse was the subtype of abuse most associated with externalizing behavior problems, compared to emotional abuse (McGuire et al., 2018; Petrenko et al., 2012; Raviv et al., 2010), including violent offending behavior in youth with criminal record (Asscher et al., 2015), anger (Collin-Vézina et al., 2011), and alcohol and drug use in youth placed in residential care (Olorunlambe et al., 2025). Additionally, Imai and colleagues (2021) mentioned that physical abuse was significantly associated with hyperactive/impulsive symptoms in youth placed in residential care, as reported by their primary caregivers in care.

Furthermore, there is a lack of studies analyzing the specific and unique role of emotional abuse on externalizing symptoms (Silva et al., 2014), especially in young people placed in residential settings. However, some studies found that emotional abuse was also correlated with externalizing problems in samples of high-risk youth (e.g., living in juvenile correctional facilities) (Hodge & Yoder, 2017; Muniz et al., 2019; Silva et al., 2014), as well as with anger (e.g., van Vugt et al., 2014) and hyperactive/impulsive symptoms in young people placed in residential care (Imai et al., 2021). Together, these findings highlight that emotional and/or physical abuse experiences negatively affect youth's mental health (Magalhães & Camilo, 2023; van Vugt et al., 2014), although findings suggest that physical abuse shows stronger links with externalizing symptoms (Petrenko et al., 2012) and emotional abuse shows stronger associations with internalizing symptoms (van Vugt et al., 2014). In fact, externalizing problems are the most documented effects of physical abuse (Myers, 2011), because this type of abuse tends to affect more anger-dysregulation, leading to control and behavior problems (Hart et al.,

2018; Iverson et al., 2014; Polak et al., 2000). Additionally, these associations may be explained by modeling processes of their parents' abusive behavior, based on Social Learning Theory (Felson & Lane, 2009). This theory suggests that abusive experiences may influence personality by providing a model to children of how they should respond and interact with the world (Bandura, 1978). On the other hand, emotional abuse compromises a child's essential needs for belonging, safety and care, leading to emotional regulation difficulties, feelings of worthlessness, and insecure attachment, which may explain these symptoms (Dvir et al., 2014; Hart et al., 2018). Although there are different patterns of association between each type of abuse and internalizing and externalizing symptoms (e.g., van Vugt et al., 2014), physical abuse rarely occurs without emotional abuse, making it difficult to analyze these effects separately (Descartes et al., 2020).

Furthermore, in some studies, neglect (physical and emotional) was also associated with self-reported internalizing problems, such as depression and anxiety, in young people placed in out-of-home care, even more than physical or emotional abuse (Moussavi et al., 2022). Specifically, youth in residential care who experienced physical or emotional neglect self-reported clinical levels of post-traumatic stress, dissociation and anxiety (Collin-Vézina et al., 2011), as well as depressive symptoms (Collin-Vézina et al., 2011; Yoon et al., 2019). Also, there is some evidence that parental neglect is significantly associated with externalizing symptoms, such as conduct problems and hyperactivity/inattention symptoms in children living in or entering residential care, reported by their caregivers (Gordon et al., 2023; Zhang et al., 2019), as well as self-reported anger (Collin-Vézina et al., 2011). In fact, neglectful experiences involve a lack of emotional and physical care. This deprivation has been associated with atypical development of brain structures responsible for cognition and emotion, compromising self-regulation, as well as executive and cognitive functioning. Neglect, especially emotional neglect, is also related to insecure attachment to caregivers, which may lead to internalizing and externalizing problems (Avdibegović & Brkić, 2020; Kaçar-Başaran & Kızıltepe, 2025). Furthermore, compared to abuse, child neglect is less visible and harder to detect. This fact may lead to chronic exposures and cumulative effects on developmental abilities, increasing the risk of internalizing and externalizing symptoms (Hildyard & Wolfe, 2002; Tang et al., 2022).

Contrarily to these findings, some studies reported that neglect was not associated with internalizing (Magalhães & Camilo, 2023) nor with externalizing problems in youth in residential care (Imai et al., 2021; Magalhães & Camilo, 2023). These non-consistent results may be due to the subtype of neglect assessed in these studies (i.e., mostly physical or supervision neglect), to the outcomes measured (i.e., internalizing and externalizing symptoms)

(Magalhães & Camilo, 2023), as well as to differences in study samples (e.g., children in the CPS versus general population). Some authors also suggest that compared to physical or supervisory neglect, emotional neglect may have a greater influence on youth's psychological health (Hagborg et al., 2017), while physical neglect seems to be more related to academic difficulties, including poor achievement, school dropout or even delinquency (Eriksson et al., 2018; Magalhães & Camilo, 2023). In addition, neglected children typically remain passive and tend to display feelings of helplessness in response to stress, which may explain their high vulnerability to internalizing symptoms and relatively lower levels of externalizing symptoms, compared to other forms of maltreatment (Hildyard & Wolfe, 2002; Tang et al., 2022). Although neglect is the most prevalent type of child maltreatment, the relationship between neglect and psychopathology has received limited investigation due to the use of different definitions of neglect subtypes, requiring further investigation (Tang et al., 2022; Zeanah & King, 2022).

In sum, previous studies have shown different patterns of association between different forms of child maltreatment and psychopathology. Specifically, physical abuse has been reported as the strongest predictor of externalizing symptoms, while psychological abuse has been more related to internalizing symptoms. Neglect revealed inconsistent findings. A recent umbrella synthesis (Coughlan et al., 2026) indicated that different forms of child maltreatment, including emotional abuse, physical abuse and neglect (emotional and physical neglect), were associated with mental health difficulties, including internalizing and externalizing symptoms. However, in this study, the associations between child maltreatment and externalizing problems tend to be similar for these different forms of child maltreatment. In contrast, regarding internalizing problems, there were some small differences. Emotional abuse was strongly related to these symptoms, while physical abuse showed the weakest association. Neglect revealed moderated associations (Coughlan et al., 2026). These diversified results may be related to methodological differences across studies.

The distinct associations between experiences of abuse and neglect and their relationships with internalizing and externalizing symptoms mentioned before can be better understood through the Dimensional Model of Adversity and Psychopathology proposed by McLaughlin and Sheridan (2016). According to this framework, different experiences of childhood adversity (including threat- and deprivation-related experiences) are related to distinct and unique impacts on neural development and psychopathology (Miller et al., 2018). Specifically, experiences of threat, such as physical and emotional abuse, involve an actual or a threat of harm to the child. Research found that this is associated with changes in neural systems that directly influence learning and emotion regulation. These changes can increase hypervigilance,

emotional reactivity, and difficulties in fear responses, which may help explain the associations with both internalizing and externalizing symptoms. Experiences of deprivation, such as physical and emotional neglect, involve the absence of expected cognitive, social and environmental inputs, leading to decreased enrichment in inputs and, therefore to deficits in executive or cognitive functions and in verbal abilities (McLaughlin & Sheridan, 2016; McLaughlin et al., 2014; Miller et al., 2018). Through deficits in verbal abilities, Miller and colleagues (2018) suggested that experiences of deprivation were associated with the risk for externalizing symptoms. This model does not explain the mechanism through which neglect experiences are related to internalizing symptoms because, according to this framework, experiences of deprivation do not directly affect emotional reactivity circuits (only cognitive systems), which often affect both internalizing and externalizing symptoms more directly (McLaughlin et al., 2014). However, some studies showed that child neglect is related to internalizing symptoms (e.g., Collin-Vézina et al., 2011; Moussavi et al., 2022; Olorunlambe et al., 2025). These associations may be explained by other factors such as maladaptive coping strategies, including self-blame (Tanzer et al., 2021) or rumination and catastrophizing (Zhang et al., 2024).

All these findings are more appropriately discussed when considering the reporting methods used to assess child maltreatment and psychopathology or the type of informant (Negriff et al., 2017). Regarding child maltreatment, studies can rely on different sources, such as CPS records, caregiver and youth reports, which may yield mixed results. Accordingly, some studies showed some disagreement between youth's reports or the information from their primary caregivers and CPS records (Negriff et al., 2017), with youth and/or caregivers reporting more experiences of abuse and neglect, especially less visible subtypes, compared to those registered in CPS records (Sierau et al., 2017). Therefore, studies that use only CPS records may underestimate the prevalence of child maltreatment and related psychopathology (Gilbert et al., 2009; Negriff et al., 2017). Additionally, a meta-analysis suggested that the measure of child maltreatment moderates the relationship between maltreatment and internalizing problems, with stronger associations using youth's and others' reports, compared to CPS records (Magalhães & Camilo, 2023). Furthermore, it is also relevant to note that when the measures are filled by the same informant, the stronger associations between maltreatment and these symptoms may be partially explained by shared variance (Magalhães e Camilo, 2023). However, sometimes caregivers or CPS records can identify child maltreatment experiences that young people did not report. This may be because youth may not identify child maltreatment experiences or may be ashamed to reveal them (Negriff et al., 2017). These

findings suggest the importance of collecting information on child maltreatment from multiple sources, because a higher convergence between different sources appears to be a stronger predictor of psychopathology (Negriff et al., 2017; Sierau et al., 2017).

In terms of the methods to assess psychopathology, the reliance on self-reported symptoms or other informants may impact research findings (Cotton et al., 2020). Different studies have shown that youth, both in community settings and in residential care, tend to report more internalizing and externalizing symptoms compared to caregivers' reports (e.g., Rescorla et al., 2013; Fischer et al., 2016; Simão & Nunes, 2026). These findings support evidence that suggests that caregivers tend to underreport symptoms, especially internalizing, in children and youth, as these symptoms are less visible and caregivers may not recognize their feelings of anxiety and depression, unless their children communicate those feelings (Rescorla et al., 2013; Simão & Nunes, 2026). Furthermore, residential staff, in particular, report symptoms from youth who have known for less time than their birth families, underestimating their problems (Gearring et al., 2015). Therefore, youth's reports may be more reliable and sensitive for assessing internalizing symptoms (e.g., Cecil et al., 2017; Cotton et al., 2020; Simão & Nunes, 2026). In terms of externalizing symptoms, these are more likely to be identified by caregivers, considering that these problems are quite visible, contributing to a higher agreement between caregivers' and youth's reports (Gearring et al., 2015; Rescorla et al., 2013). However, some studies mentioned that young people also tend to underreport externalizing symptoms (Cotton et al., 2020), reflecting the complexity of the discrepancies between informants. Furthermore, the type of informant can influence the findings when analyzing the effects of child maltreatment on psychopathology. For example, Cecil and colleagues (2017) suggested that all forms of child maltreatment, including physical and emotional abuse and physical and emotional neglect, were more strongly associated with self-reports of youth's internalizing and externalizing symptoms, compared to informant reports (i.e., teachers). Additionally, Zhang and colleagues (2019) mentioned that emotional problems in children placed in residential care, as reported only by caregivers (such as residential caregivers or directors), were not related to any child maltreatment experience. Both studies highlight possible differences in the associations between child maltreatment and psychopathology, according to the informant. Therefore, it is relevant and recommended to use self-reports and reports from another informant to assess psychopathology in youth in residential care, especially when analyzing the effects of child maltreatment (Gearing et al., 2015; Zhang et al., 2019).

1.2. Gender Differences in Child Maltreatment and in Psychopathology

Individual differences such as gender are important for understanding experiences of child maltreatment and psychopathology. Therefore, it is essential to know and clarify if there are differences in psychopathology between boys and girls with different child maltreatment experiences (Bader & Frank, 2025). Accordingly, some evidence shows that there are gender differences in child maltreatment (e.g., Águila-Otero et al., 2020; Calheiros et al., 2020; Moussavi et al., 2022), in psychopathology (e.g., Águila-Otero et al., 2020; Campos et al., 2019; Li et al., 2019) and in the association between child maltreatment and psychopathology (e.g., Moussavi et al., 2022; Prachason et al., 2024) that should be considered. However, studies yield mixed results.

In terms of child maltreatment, some studies did not find gender differences regarding some types of child maltreatment, including physical and psychological abuse, and physical and psychological neglect (e.g., Åsen et al., 2024; Collin-Vézina et al., 2011; Indias et al., 2019). In contrast, some research mentioned that boys experienced or have higher odds of experiencing child maltreatment. For example, a study conducted by Calheiros and colleagues (2020) in Portuguese residential youth care settings mentioned that girls presented lower levels of neglect (lack of supervision), physical and psychological abuse, and emotional and educational maltreatment compared to boys. Additionally, a recent study indicated that boys (from a community sample) revealed higher odds of experiencing physical abuse (Luo et al., 2025). This may be related to traditional gender roles that socialize males to exhibit higher levels of assertiveness and aggression. Therefore, boys may present more externalizing behaviors such as physical aggression and rule-breaking behavior. This may lead to situations where caregivers use physical punitive methods of discipline to correct their child's behavior (Card et al., 2008; Dong et al., 2024).

Contrarily, Asscher and colleagues (2015), including a sample of juvenile offenders, indicated that all forms of abuse (physical and sexual abuse, neglect, and any form of maltreatment) were more frequently experienced by girls than boys. These findings are somewhat consistent with the study of Descartes and colleagues (2020), which found that physical, emotional and sexual abuse were higher in girls, however, there were no significant gender differences regarding emotional and physical neglect. In addition, according to some studies, girls placed in foster and residential care are more likely to report exposure to more types of child maltreatment (Emmerich et al., 2024; Moussavi et al., 2022) and to be polyvictims (Sölva et al., 2020). These findings may be explained by Wellman (1993), who suggested that girls are socialized to be more responsive to others' needs, which may contribute

to their vulnerability to abuse and neglect. Furthermore, the mixed results presented here may be related to specific characteristics of the samples included in the different studies, as well as to cultural and gender role differences (Descartes et al., 2020).

Regarding psychopathology, the mental health of maltreated children and youth also differs among girls and boys placed in residential care (Águila-Otero et al., 2020; Campos et al., 2019; Li et al., 2019). Most of the studies suggested that girls in out-of-home care self-reported higher levels of internalizing symptoms than their male counterparts (e.g., Emmerich et al., 2024; Gutterswijk et al., 2022; Hiller et al., 2021), while boys presented more externalizing symptoms in comparison to girls (e.g., Campos et al., 2019; Gutterswijk et al., 2022; Li et al., 2019). Specifically, studies conducted in residential care facilities in Portugal showed that girls self-reported higher levels of internalizing problems (Campos et al., 2019) and emotional distress (Magalhães et al., 2016). These results are consistent with the findings of Gutterswijk and colleagues (2022) that suggested that girls in secure residential care self-reported more post-traumatic stress disorder symptoms or internalizing problems. However, in this study, there were no gender differences regarding internalizing symptoms reported by caregivers (Gutterswijk et al., 2022). Furthermore, girls placed in care had approximately three times higher odds of having depression, dysthymia and social phobia reported by their primary caregivers in care (Jozefiak et al., 2016) and higher internalizing symptoms, especially anxiety and depressive symptoms (Doerfler et al., 2009; Moussavi et al., 2022). These findings may be explained by the high emotional awareness (Bailen et al., 2019) and rumination strategies typically adopted by girls (Martínez-Líbano et al., 2025), as well as by social expectations (McNeill & Zeman, 2021), and biological and hormonal changes during adolescence (Mohamed Ali et al., 2019; Jackson & Short, 2018). However, Collin-Vézina and colleagues (2011) mentioned that although girls in residential care were more likely to self-report clinical levels of post-traumatic stress and dissociation symptoms, no gender differences were found on anxiety and depression scales.

On the other hand, boys in care tend to reveal more externalizing symptoms, based on youth self-reports (Campos et al., 2019; Magalhães et al., 2016) and others' reports (Gutterswijk et al., 2022; Whitted et al., 2013), including oppositional defiant and conduct problems (Campos et al., 2019), as well as higher antisocial behavior and anger control problems (Magalhães et al., 2016). Accordingly, Jozefiak and colleagues (2016) found that boys in residential care settings had higher odds of receiving a DSM-IV conduct disorder diagnosis compared to girls. These findings may be explained by factors such as biological

predispositions, social reinforcement (Guassi Moreira et al., 2021), as well as by gender expectations and socialization (McNeil & Zeman, 2021).

Other studies still mentioned that girls in residential care displayed not only higher levels of internalizing, but also higher levels of externalizing symptoms (Farley et al., 2021). Accordingly, Handwerk and colleagues (2006) revealed that girls admitted to residential care facilities presented more internalizing and externalizing problems, but only when reported by caregivers. When reported by youth themselves, scores on externalizing scales were higher for girls, but there were no gender differences on the internalizing scales (Handwerk et al., 2006). In sum, gender differences in child maltreatment and in psychopathology have been widely described in research. Still, results are somewhat inconsistent, varying according to the symptoms, the sample and the informant.

Furthermore, gender differences in terms of the association between maltreatment and mental health problems or psychopathology also require more research (Magalhães & Camilo, 2023). If some studies revealed that the association between child maltreatment and psychopathology does not differ by gender, both in community (Scott et al., 2023) and in residential care settings (Fischer et al., 2016), others revealed some differences. Specifically, many studies have reported that girls, compared to boys, may be more susceptible when exposed to adverse childhood experiences, such as child maltreatment and, therefore, more vulnerable to psychological difficulties, especially internalizing symptoms (e.g., Levkovich et al., 2025; Llosada-Gistau et al., 2019; Moussavi et al., 2022). For self-reported internalizing symptoms, Moussavi and colleagues (2022) found that associations between all forms of maltreatment (i.e., physical and emotional abuse, neglect, and sexual abuse) and anxiety symptoms in youth in foster care, as well as between neglect and depression symptoms, were stronger for girls, compared to boys.

Focusing on externalizing symptoms, Magalhães and Camilo (2023) found in their meta-analysis that gender may moderate the association between child maltreatment and these symptoms in youth in out-of-home care. Specifically, girls showed stronger effects compared to combined samples (boys and girls). However, this study did not find differences when comparing boys and girls only (Magalhães & Camilo, 2023). In contrast, Li and colleagues (2019) concluded in their meta-analysis that the association between child maltreatment and externalizing symptoms was stronger for boys in placement settings. Furthermore, Prachason and colleagues (2024) proposed that there are gender-specific patterns of susceptibility to abuse for girls and neglect for boys. Specifically, the study explored gender differences between all forms of child maltreatment and psychopathology in the general population and found that the

association between emotional abuse and psychiatric symptoms (e.g., anxiety, depression, hostility, somatization) was stronger for girls. In contrast, the relationship between physical and emotional neglect and these symptoms was stronger for boys. Still, in a study conducted on a sample from the community, physical abuse was associated with internalizing symptoms in girls and externalizing symptoms in boys, suggesting that girls may deal with the outcomes of child maltreatment by internalizing, while boys are more likely to externalize. This suggests that girls and boys may have different patterns of response when exposed to child maltreatment (Keyes et al., 2012).

Taken together, these findings suggest that gender may moderate the role of child maltreatment on mental health. However, the role of gender in the relationship between child maltreatment and psychopathology in young people placed in residential care is still not fully understood and, therefore, should be further explored (Magalhães & Camilo, 2023).

1.3. The Current Study

The current study is focused on the role of child maltreatment in the youth's mental health in residential care. Residential care in Portugal is a protective out-of-home care measure used to protect children and youth who are unable to live or remain with their biological families, as well as to promote their rights (Magalhães & Camilo, 2023). This measure involves placing the child in a residential facility (e.g., group homes or specialized treatment settings) that should meet young people's needs and developmental outcomes (Law No. 147/99; Article 49.º). Although progress is being made toward deinstitutionalization in the Portuguese context, Portugal continues to have a high number of children and adolescents placed in residential care (United Nations Children's Fund, 2024). Specifically, according to the latest official data (Instituto de Segurança Social [ISS], 2025), in 2024, 6349 children and youth were placed in out-of-home care. Of these, 5152 (around 80%) were placed in non-specialized residential care and 453 (around 12%) were placed in specialized residential care (including therapeutic residential care and autonomy apartments). The main reason for placement was neglect (69.8%), and psychological abuse (4.9%) and physical abuse (4%) were also experienced by these youth. Children and youth in non-specialized residential care are mostly adolescents aged 12 to 17 (67%) and boys (approximately 51%) (ISS, 2025), with complex life histories, chronic problems and previous failed interventions (del Valle & Bravo, 2013). These children and youth revealed a high prevalence of serious behavioral (24.5%) and mental health problems, including clinical mental disability (6.8%) and clinical mental problems (5.2%). In addition, these youth

also have regular psychological (44.2%) and psychiatric (28.2%) interventions, and 30.4% use medication (ISS, 2025).

Considering this evidence and the literature review previously presented, it is visible that young people in residential care often face serious mental health problems, including internalizing and externalizing symptoms (e.g., Li et al., 2019; Moreno-Manso et al., 2023), making them particularly vulnerable (Magalhães & Camilo, 2023). One plausible explanation for these worst outcomes may be their history of maltreatment – physical and psychological abuse, and physical and psychological neglect (Collin-Vézina et al., 2011; Magalhães & Camilo, 2023). Although several studies have analyzed the negative effect of child maltreatment on psychopathology, knowledge remains limited and inconsistent, especially on youth placed in residential care (Åsen et al., 2024).

In addition, the literature suggested that the association between child maltreatment and psychopathology seems to depend on the type of child maltreatment (Magalhães & Camilo, 2023), however, studies revealed inconsistent findings. Additionally, this relationship seems to vary according to the informant (e.g., Cecil et al., 2017; Fischer et al., 2016; Magalhães & Camilo, 2023). Considering that there is generally low agreement between youth self-reports of psychopathology and the reports from their primary caregivers, particularly when youth are placed in residential care (Gearring et al., 2015), it is important to analyze the relationship between each type of child maltreatment and psychopathology, using both youth self-reports and caregivers' reports. This is particularly relevant considering that most of the studies use generally only one source of information to analyze youth's psychopathology, mostly caregivers, which may lead to misinterpretation of youth's problems (Simão & Nunes, 2026). Therefore, combining these reports may help diminish potential biases, contributing to a more comprehensive knowledge about youth's functioning (Simão & Nunes, 2026).

Finally, the literature also suggests that there are gender differences regarding the association between child maltreatment and psychopathology (e.g., Moussavi et al., 2022). Specifically, some studies suggested that gender may moderate the impact of child maltreatment on mental health in community samples (Keyes et al., 2012; Prachason et al., 2024), however, the moderator role of gender, specifically in youth placed in residential care, is still not fully understood and should be further examined (Magalhães & Camilo, 2023). Therefore, more efforts are needed to disentangle the effects of each type of maltreatment on psychopathology, exploring the moderating role of gender in this relationship. This may provide a more comprehensive knowledge of the role of child maltreatment on the mental health of youth

placed in residential care, informing the implementation of effective and tailored interventions that meet their mental health needs.

As such, this study aims to: 1) analyze the relationship between child maltreatment and psychopathology of youth living in residential care, based on a multi-informant approach, considering different informants for the assessment of child maltreatment (i.e., care workers in care) and psychopathology (i.e., youth and their primary caregivers in care); 2) analyze the moderating role of gender in the association between child maltreatment and psychopathology.

CHAPTER II

Method

2.1. Participants

A sample of youth placed in residential care settings participated in the present study (N = 155). Most were female (57.4%; gender was operationalized as youth's biological sex: 0 = male, 1 = female) and the mean age of these participants was 14.89 (SD = 1.59; 12 - 17 years old). Most of these participants were Portuguese (83.9%) and were currently attending middle school (7th to 9th grade) (69.7%), high school (18.7%), and 5th and 6th grade (9.7%).

Most of these youth were placed in residential care for the first time (69.5%), and the length of stay in the residential care home was approximately 2 years and 1 month (M = 25.26 months; SD = 24.86). Additionally, the youth were involved in the residential care system for around 2 years and 7 months (M = 31.20 months; SD = 28.61). Of these, 34.3% were in care for 12 months or less, 26.3% for 12 to 24 months, and 39.4% for more than 24 months. Regarding the reasons for youth entering in residential care settings, 40% were exposed to neglect experiences; 34.2% were exposed to behaviors that affected their safety or emotional stability; 30.9% engaged in behaviors that affected their health, safety and development; 23.2% were physically abused; 19.4% were abandoned or left to its own; 19.4% were psychologically abused; and 4.5% were sexually abused. Most of these participants have an intervention plan focused on family reunification (38.7%) and a similar percentage will remain in long term residential care placement (37.4%).

In addition, the youth's primary caregivers in care and the care workers also participated in this study. Most of the caregivers were female (87.7%) and Portuguese (92.3%), with ages between 23 and 60 years (M = 40.29; SD = 12.04). In terms of qualifications, the caregivers had different academic backgrounds, including social education (31.6%) and psychology (5.8%). The length of time working in residential care ranged from 1 month to 35 years. Care workers were also mostly female (91.6%) and Portuguese (98.7%), aged between 23 and 52 years (M = 37.05; SD = 8.48). The care workers also had diverse academic and professional backgrounds, with psychology (45.2%) and social service (39.4%) being predominant, and 17.4% were directors of the care worker team. The length of time working in residential care ranged from 4 months to 20 years.

2.2. Measures

In the present study, a multi-informant approach was used, based on the perspectives of youth, their primary caregivers in care and care workers.

2.2.1. Sociodemographic Questionnaires

Youth completed a questionnaire with sociodemographic information, including their gender, age, nationality, and current educational year.

The primary caregivers of these youth in care and the care workers also completed a sociodemographic questionnaire with information related to their gender, age, educational year, nationality, marital status, years of work experience, as well as their function in the residential care home. Additionally, care workers completed a sociodemographic questionnaire about the previous history of these youth in the CPS, the reasons for their placement, length and number of placements, frequency of contacts with their biological family, as well as the youth's promotion and protection plan.

2.2.2. The Child Maltreatment Severity Questionnaire (MSQ)

The severity of child abuse and neglect experienced by youth was obtained from care workers through The Child Maltreatment Severity Questionnaire (MSQ; Calheiros, Silva, & Magalhães, 2021). This questionnaire includes 18 items, which are rated in terms of their level of severity, using a 5-point Likert Scale (1 = *unknown/never happened*; 2 = *minimally severe*; 3 = *moderately severe*; 4 = *highly severe*; 5 = *extremely severe*). The MSQ is organized in a three-factor structure: Physical Neglect, Psychological Neglect and Physical and Psychological Abuse. Physical Neglect (α = .86) includes 8 items that evaluate physical hygiene and well-being, clothing, feeding, physical health monitoring, housing and hygiene conditioning, security and monitoring, as well as socio-moral development (e.g., "Context of socio-moral development"). Psychological Neglect (α = .79) includes 6 items that assess developmental needs, school monitoring, mental health monitoring, supervision, relationship with attachment figures, and autonomy (e.g., "Age-appropriate autonomy"). Physical and Psychological Abuse (α = .80) is composed of 4 items that identify coercive discipline and physical violence methods, as well as aggressive verbal and physical interaction (e.g., "Aggressive physical interaction"). Higher scores in these dimensions indicate higher child abuse and/or neglect (Calheiros, Silva, & Magalhães, 2021).

In the present study, the results indicated adequate reliability for two factors: Physical Neglect (α = .77) and Physical and Psychological Abuse (α = .83) (Kline, 2016). Psychological

Neglect (α = .68) revealed an internal consistency lower than the acceptable value (.70) (Kline, 2016), however, the inter-item correlations (.27) lie within the range (.15 - .50) suggested by Clark and Watson (1995), recommending that we could include this dimension in the following analyses.

2.2.3. The Strengths and Difficulties Questionnaire (SDQ)

The Strengths and Difficulties Questionnaire (SDQ, Goodman et al., 1998, adapted to the Portuguese context by Fleitlich et al., 2005) is a brief behavioral screening questionnaire used to assess the psychological adjustment of youth. This questionnaire can be rated by youth and by informants, such as their parents, and these versions only differ in grammar. This questionnaire has 25 items, focused on positive and negative attributes, divided equally into five scales. The Emotional Symptoms scale (α for youth = .66; α for parents = .67) assesses difficulties related to worries, unhappiness and physical complaints (e.g., "I am often unhappy, down-hearted or tearful"). The Conduct Difficulties scale (α for youth = .60; α for parents = .63) assesses conduct problems such as lying, stealing, and fighting (e.g., "I get very angry and often lose my temper"). The Hyperactivity-Inattention scale (α for youth = .67; α for parents = .77) measures difficulties in concentrating, impulsivity and restlessness (e.g., "I am restless, I cannot stay still for long"). The Peer Relationship Problems scale (α for youth = .41; α for parents = .57) analyzes the relationship with friends and adults including the difficulty in making friends, social withdrawal and bullying behaviors (e.g., "Other children or young people pick on me or bully me"); Pro-Social Behavior scale (α for youth = .66; α for parents = .65) identifies youth's positive traits such as kindness, empathy, consideration for others' feelings (e.g., "I try to be nice to other people. I care about their feelings"). Each item can be answered on a 3-point Likert Scale (0 = *not true*; 1 = *somewhat true*; 2 = *certainly true*). However, there are some items (7, 11, 14, 21, 25) for which the response scale was reverse-coded. Therefore, it is possible to have scores in each one of these scales that, when combined (except the Pro-Social Behavior scale), generate the total score of difficulties. Additionally, these items can also be organized in two other scales: Internalizing Symptoms by summing the Emotional and Peer Relationship Problems scales, and Externalizing Symptoms by summing the Conduct Difficulties and Hyperactivity-Inattention scales (Goodman & Goodman, 2009; Goodman, 2001; Goodman et al., 1998).

In the present study, this questionnaire was completed by youth and by their primary caregivers in care, and only the Internalizing and Externalizing scales were considered, considering the fragility of the internal consistency of the other scales. Internalizing (α = .73)

and Externalizing (α = .83) scales completed by caregivers in residential care, as well as the Internalizing scale (α = .70) completed by youth, revealed satisfactory internal consistency (Kline, 2016). The Externalizing scale completed by youth (α = .66) revealed an internal consistency lower than the acceptable value (.70) (Kline, 2016), however, the inter-item correlations (.15) lie within the range (.15 - .50) suggested by Clark and Watson (1995), considering this measure consistent.

2.3. Data Collection and Data Analysis

The present study is part of a larger research project, which received approval from the Ethical Committee of ISCTE (Ref. 133/2022; Ref. 42/2023). The data used in the current study was previously analyzed to test different hypotheses (Silva et al., 2025). The data collection started in May 2023 and concluded in February 2024. Data collection began by inviting various generalist residential care homes in Portugal, through email, to participate in the project. Additionally, to clarify the study and its objectives, meetings were conducted online or in person in the residential care homes. After these meetings, 20 residential care homes agreed to participate in the project.

Additionally, the inclusion criteria for this project required that youth: 1) were aged between 12 and 17 years; 2) were proficient in the Portuguese language; 3) were currently placed in residential care homes; and 4) had no cognitive limitations or impairments that could affect their ability to complete the required questionnaires. Based on these inclusion criteria, 155 youth accepted to participate and were included in the project. In the informed consent form, participants were informed that their participation was voluntary and confidential and that their data would be anonymized. Furthermore, participants were also informed that they could choose not to participate or quit at any time, without negative consequences. After obtaining consent from youth and their legal guardians, as well as from their primary caregivers in care and from care workers, all these participants completed a set of questionnaires. For the present study, only the answers to the measures described above were considered.

The IBM SPSS Statistics for Windows, Version 30.0 was selected to run descriptive statistics, the reliability of the measures and the Pearson correlations between variables. Additionally, the data analyses involved two main stages, using the IBM SPSS AMOS for Windows, Version 30.0. First, a path regression-based model was tested to analyze the associations between child maltreatment and psychopathology, more specifically, internalizing and externalizing symptoms reported by youth and their primary caregivers in care. The goodness of fit of the model was assessed considering the following criteria: a χ^2/df below 3

and a non-significant χ^2 *p*-value, Comparative Fit Index (CFI) and Goodness-of-Fit Index (CFI) approaching 1, and a Root-Mean-Square Error of Approximation (RMSEA) below .08 (Hu & Bentler, 1999; Schermelleh-Engel et al., 2003). Then, a multigroup model was estimated to examine the moderating role of gender in those associations, comparing two models: an unconstrained model and a fully constrained model that assumed equivalent paths across genders. Gender differences in coefficients were then evaluated using a *z*-test difference. All the standardized regression coefficients will be presented in the Results section.

CHAPTER III

Results

3.1. Descriptive Statistics and Correlations for Study Variables

Descriptive statistics, including means, standard deviations, and bivariate correlations between the relevant variables for the present study, are presented in Table 1. The results showed a significant positive correlation between physical and psychological abuse and the internalizing symptoms reported by youth's primary caregivers in care, as well as between this type of child maltreatment and the internalizing and externalizing symptoms according to youth.

Moreover, the three forms of child maltreatment analyzed in the present study were positively correlated with each other. Regarding the associations between the dimensions of youth psychopathology, the internalizing symptoms reported by caregivers in care were positively correlated with caregiver-reported externalizing symptoms, as well as with the youth-reported internalizing symptoms. In addition, the results showed a positive association between the externalizing symptoms reported by caregivers in care and by youth. Internalizing symptoms and externalizing symptoms, according to the youth, were also significantly and positively correlated.

Additionally, regarding sociodemographic characteristics, the results showed that youth reports of internalizing symptoms were positively associated with their gender. Specifically, girls tend to report higher levels of internalizing problems compared to boys. In addition, a negative association between the externalizing symptoms as indicated by caregivers in care and the youth's age was found, showing that older youth tend to present fewer externalizing symptoms when reported by their primary caregivers in residential care. The youth's age was also positively associated with the youth's length of stay in the current residential care home. The number of prior placements was positively related to externalizing symptoms reported by youth and to the severity of physical and psychological abuse.

Table 1

Descriptive Statistics and Correlations Between Study Variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. Gender (Youth)[a]	-	-	-									
2. Age (Youth)	14.89	1.59	-.04	-								
3. Number of Prior Placements	0.45	0.78	-.05	.12	-							
4. Length of Stay in Care	25.26	24.86	.00	.25**	.08	-	-					
5. Physical Neglect	1.71	0.65	.13	.05	-.04	.15	-					
6. Psychological Neglect	2.28	0.77	.11	.09	-.10	-.01	.63***	-				
7. Physical and Psychological Abuse	1.62	0.79	.06	.06	.20*	-.03	.27***	.39***	-			
8. Internalizing (Caregivers)	6.72	3.72	.09	-.06	.10	-.02	.09	.07	.25**	-		
9. Externalizing (Caregivers)	7.12	4.48	.02	-.17*	.03	-.06	.01	.02	.10	.30***	-	
10. Internalizing (Youth)	8.21	3.71	.29***	-.08	.08	-.09	.05	.10	.24**	.40***	.07	-
11. Externalizing (Youth)	7.98	3.47	.07	-.04	.17*	-.03	-.05	-.04	.16*	.12	.23**	.31***

Note. $N = 155$; Gender: boys (0); girls (1); [a] biserial correlation; $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

3.2. Child Maltreatment and Psychopathology: A Multi-Informant Approach

Considering that statistically significant associations of gender, age and prior placements with psychopathology, the path regression-based model was tested controlling for the effect of these variables. The model showed a good fit (χ^2 (23) = 25.125, p = .344; χ^2/df = 1.09; CFI = .988; GFI = .970; RMSEA = .024) and explained 6.4% of the variance in internalizing symptoms (R^2 = .064), and 3.6% in externalizing symptoms (R^2 = .036), both reported by caregivers in care. Also, this model explained 11.1% of the variance in internalizing symptoms (R^2 = .111), and 4.2% in externalizing symptoms (R^2 = .042), both reported by youth.

Results revealed a positive and significant association between physical and psychological abuse and internalizing symptoms reported by caregivers in care (β = .26, p = .002) and by youth (β = .24, p = .004), as well as with youth's reports of externalizing symptoms (β = .17, p = .043). The other forms of child maltreatment were not significantly related to the youth's psychopathology (p > .05). All standardized coefficients are presented in Table 2.

Table 2

Path Regression-Model Results: The Relationship Between Abuse and Neglect and Psychopathology, according to the Informant

	Outcomes											
	Caregivers Report						Youth Report					
	Internalizing			Externalizing			Internalizing			Externalizing		
Predictors	β	*SE*	*p*	β	*SE*	*p*	β	*SE*	*p*	β	*SE*	*p*
Physical Neglect	.06	0.58	.543	-.01	0.70	.890	-.07	0.55	.498	-.05	0.54	.624
Psychological Neglect	-.07	0.51	.516	.00	0.62	1.000	.03	0.48	.780	-.06	0.47	.559
Physical and Psychological Abuse	.26	0.40	**.002**	.11	0.49	.189	.24	0.38	**.004**	.17	0.37	**.043**
Covariates												
Age (Youth)				-.16	0.21	**.035**						
Gender (Youth)							.23	0.50	**< .001**			
Number of Prior Placements										.12	0.33	.103

3.3. Child Maltreatment and Psychopathology: The Moderating Role of Gender

A multigroup model was estimated to analyze the moderating role of gender in the association between child maltreatment and psychopathology. The Chi-square difference test revealed that the constrained model had a significantly worse fit compared to the unconstrained model ($\Delta\chi^2$ (14) = 32.687, p = .003). This indicates that the models differ significantly between boys and girls placed in residential care. The model for girls explained 13.6% of the variance in internalizing symptoms (R^2 = .136), 6.2% in externalizing symptoms, both reported by their caregivers in care (R^2 = .062), and 7.1% of the variance in internalizing symptoms (R^2 = .071), and 15.9% in externalizing symptoms, both reported by youth (R^2 = .159). The model for boys explained 16.6% of the variance in internalizing symptoms (R^2 = .166), 4% in externalizing symptoms, both reported by their primary caregivers in care (R^2 = .040), and 7% of the variance in internalizing symptoms (R^2 = .070), and 11% in externalizing symptoms, both reported by youth (R^2 = .110).

Standardized coefficients on the association between child maltreatment and psychopathology symptoms, for boys and girls, are reported in Table 3. Statistically significant differences between genders were found on the following paths: (a) the association between physical neglect and the internalizing symptoms reported by caregivers in care was stronger and positive for girls (β = .41, p = .002), but negative for boys (β =-.35, p = .010) (z-score = 3.942, p < .001); (b) physical neglect was significantly and negatively related to youth's reports of externalizing symptoms, but only for boys (β =-.30, p = .032) (z-score = 2.216, p = .027); (c) the association between psychological neglect and the internalizing symptoms according to caregivers in care was significantly and negatively associated only among girls (β =-.34, p = .019) (z-score =-2.465, p = .014); and (d) higher prior placements in the out-of-home care system were positively associated with self-reported externalizing symptoms, only for girls (β = .37, p < .001) (z-score = 3.510, p < .001).

Although the differences in the following paths were not statistically significant, specific effects were found for each of the groups: (a) the relationship between physical and psychological abuse and internalizing symptoms reported by caregivers in care was significant and positive for both genders, but stronger for boys (β = .31, p = .010) than for girls (β = .23, p = .037); (b) physical and psychological abuse was positively related to self-reported internalizing symptoms, only among girls (β = .26, p = .024).

Table 3

Multigroup Analysis: The Moderating Role of Gender in the Relationship Between Child Abuse and Neglect and Internalizing and Externalizing

Path	Girls			Boys			Gender Differences	
	β	*SE*	*p*	β	*SE*	*p*	*z*-score	*p*
Caregivers								
Physical Neglect → Internalizing	.41	0.74	**.002**	-.35	0.83	**.010**	3.942	**< .001**
Physical Neglect → Externalizing	.11	0.94	.445	-.14	1.08	.331	1.233	.217
Psychological Neglect → Internalizing	-.34	0.67	**.019**	.16	0.69	.245	-2.465	**.014**
Psychological Neglect → Externalizing	-.13	0.84	.393	.11	0.90	.448	-1.137	.255
Physical and Psychological Abuse → Internalizing	.23	0.53	**.037**	.31	0.54	**.010**	-0.373	.709
Physical and Psychological Abuse → Externalizing	.17	0.67	.146	.06	0.70	.640	0.667	.505
Age (Youth) → Externalizing	-.18	0.27	.068	-14	0.34	.203	-0.145	.885
Youth								
Physical Neglect → Internalizing	.02	0.70	.874	-.18	0.90	.195	1.120	.263
Physical Neglect → Externalizing	.12	0.69	.363	-.30	0.79	**.032**	2.216	**.027**
Psychological Neglect → Internalizing	.01	0.63	.956	.02	0.75	.871	-0.090	.928
Psychological Neglect → Externalizing	-.11	0.62	.434	-.04	0.66	.789	-0.340	.734
Physical and Psychological Abuse → Internalizing	.26	0.50	**.024**	.24	0.58	.059	0.043	.966
Physical and Psychological Abuse → Externalizing	.12	0.49	.272	.16	0.51	.209	-0.149	.881
Number of Prior Placements → Externalizing	.37	0.45	**<.001**	-.10	0.42	.339	3.510	**< .001**

CHAPTER IV

Discussion

Youth living in residential care were exposed to several experiences of child maltreatment, mostly neglect and abuse, together with instability and disruption in residential care placements, which in turn are related to a greater likelihood of mental health problems (e.g., Magalhães & Camilo, 2023; Maguire et al., 2024; Moreno-Manso et al., 2023). In Portugal, this is particularly critical as there is a high percentage of children and youth placed in residential care settings, especially youth aged 12 to 17 years (ISS, 2025). Although several authors have studied the relationship between child maltreatment and mental health, results are still inconsistent and knowledge remains limited, especially when referring to youth placed in residential care (Åsen et al., 2024). Specifically, most studies did not consider the role of the informant of youth's psychopathology or the role of gender as a third variable interfering in the associations between child maltreatment and psychopathology symptoms. Therefore, the present study aimed to explore (1) the relationship between child maltreatment and psychopathology (i.e., internalizing and externalizing symptoms), using a multi-informant approach to assess youth's psychopathology (i.e., youth and their primary caregivers in care) and (2) the moderating role of gender in this relationship, using a sample of youth placed in Portuguese residential care settings.

To identify potential variables to be controlled in the models, a set of associations was first tested. Specifically, the youth's age was negatively associated with externalizing symptoms reported by their primary caregiver in care, which aligns with previous research that suggests that behavioral problems decreased with age (e.g., Calheiros, Silva, Patrício et al., 2021), considering that relevant brain development processes responsible for behavior control happened during middle adolescence (Tremblay et al., 2018). Additionally, in the present study, increased age also indicates a higher length of stay in the current residential care home, which may also contribute to understanding the presence of fewer externalizing symptoms in youth (Lee & Thompson, 2009). Although the length of stay was not significantly related to externalizing symptoms in the present study, previous research suggests that youth who stay for a longer period of time in the residential care home may develop a stronger and more supportive relationship with their caregivers in care, which in turn may improve the effectiveness of treatment and therapeutic interventions, leading to fewer behavioral difficulties (Hoffnung Assouline & Attar-Schwartz, 2020).

Moreover, youth who experienced physical and psychological abuse were also those who experienced a greater number of previous placements and those with higher externalizing symptoms, which may suggest a complex relationship between these factors. First, experiences of abuse, as evidenced in the present study and in previous research, seem to compromise youth's mental health, increasing the risk of externalizing symptoms (e.g., Magalhães & Camilo, 2023; Petrenko et al., 2012). These symptoms, in turn, are stronger predictors of placement changes, since youth with more behavioral problems are more likely to experience greater placement disruptions. Thus, the relationship between symptoms and disruption can be explained by different factors. First, behavioral problems may undermine the residential caregiver's ability to provide secure and regular care (Aarons et al., 2010). Second, these placement changes may also contribute to more behavioral problems (Aarons et al., 2010; Mishra et al., 2020; Varnish et al., 2025), by increasing youth's relational and life instability and distress (Aarons et al., 2010). Specifically, youth with a history of child abuse may not have developed secure attachment with their parents, which may make it difficult to establish reparative relationships with their primary caregivers in residential care, which in turn might exacerbate their mental health difficulties (Kernreiter et al., 2020; Maguire et al., 2024; Rabley et al., 2014). Placement changes can lead to a set of relational losses (Munro & Hardy, 2006) that might undermine the youth's opportunity to develop secure attachments (Maguire et al., 2024; Munro & Hardy, 2006; Strijker et al., 2008) and to get support from significant others (Rabley et al., 2014). Placement disruptions may involve youth's separation from siblings and friends, which in turn might enhance their risk for experiencing mental health problems, such as externalizing behaviors (Munro & Hardy, 2006).

Moreover, girls reported more internalizing symptoms compared to boys, which is consistent with previous literature in out-of-home care (e.g., Emmerich et al., 2024; Gutterswijk et al., 2022; Hiller et al., 2021), suggesting that girls may be more vulnerable to exhibiting internalizing symptoms in response to child maltreatment (Keyes et al., 2012), especially during adolescence (Gutman & McMaster, 2020). Biological and neural processes (Mohamed Ali et al., 2019; Jackson & Short, 2018), coping styles (Martínez-Líbano et al., 2025) and social expectations (McNeill & Zeman, 2021) might explain those differences. Specifically, during adolescence, not only can hormonal and social changes enhance girls' emotional reactivity (Levkovich et al., 2025), but they are also often socialized to attend more to their emotions (McNeill & Zeman, 2021), which in turn increases their emotional awareness (Bailen et al., 2019). As such, higher levels of emotional sensitivity may also contribute to more difficulties in girls' emotional regulation (Levkovich et al., 2025), which may be associated with

maladaptive coping styles, such as rumination and a higher risk of internalizing symptoms (Martínez-Líbano et al., 2025). However, gender differences were only observed in the self-reported measure of internalizing symptoms, consistent with some literature (Gutterswijk et al., 2022), suggesting that these symptoms are less visible for caregivers or more difficult to detect (Gearing et al., 2015; Rescorla et al., 2013; Simão & Nunes, 2026).

Furthermore, the three types of child maltreatment were positively correlated, which suggests that experiences of maltreatment tend to co-occur, therefore, youth placed in residential care generally experienced more than one type of maltreatment (Descartes et al., 2020). Additionally, regarding youth and caregivers' reports, youth reported more internalizing and externalizing symptoms compared to caregivers, consistent with previous research (e.g., Simão & Nunes, 2026). However, the report of caregivers on both internalizing and externalizing symptoms was moderately and positively associated with youth's reports of these symptoms, suggesting some agreement between informants. Unexpectedly, the association was stronger for internalizing symptoms, suggesting that caregivers were sensitive to these symptoms, although the literature suggests that caregivers, especially in residential care, may not recognize certain feelings or behaviors unless they are quite visible or unless youth communicate those feelings (Gearing et al., 2015; Magalhães & Camilo, 2023; Rescorla et al., 2013). This recognition of youth's feelings may be affected by the quality of the relationship between the youth and their primary caregiver in care, as well as the youth's attachment style (Gearing et al., 2015). Specifically, youth experiencing close relationships with their main caregiver in care may be more able to communicate their feelings to their caregivers, especially negative internal experiences (Bowlby, 1988), which might enrich caregivers' understanding of youth's emotional and affective experiences and lead to higher agreement between their reports (Ehrlich et al., 2011; Gearing et al., 2015). Additionally, according to Gearing and colleagues (2015), caregivers in residential care who know the youth for a longer period may better identify the youth's feelings and behaviors. However, in the present study, only the youth's length of stay in care was measured and it did not reveal significant associations with internalizing or externalizing symptoms, possibly suggesting that other variables, such as the closeness or familiarity with the residential caregiver and the attachment style, may better explain the informant agreement.

Regarding the path regression-model results, physical and psychological abuse was the only type of maltreatment positively related to youth's psychopathology, specifically to internalizing symptoms reported by both youth and their primary caregivers in residential care, and to externalizing symptoms reported only by youth, after the youth's gender, age and number of

previous placements were controlled for. This finding may suggest that experiences of threat involving harm to a child might be related to changes in neural systems involved in learning and emotion, potentially leading to reactivity, hypervigilance and difficulties in responses to fear, increasing the risk of both internalizing and externalizing symptoms (McLaughlin & Sheridan, 2016; McLaughlin et al., 2014; Miller et al., 2018). Specifically, some authors proposed that physical abuse affects anger-dysregulation, leading to more behavior problems (Hart et al., 2018; Iverson et al., 2014; Pollak et al., 2000). Regarding psychological abuse, these experiences affect child's basic needs of belonging, safety and love, which may lead to emotional dysregulation, feelings of worthlessness, and insecure attachment (Dvir et al., 2014; Hart et al., 2018). Although some studies suggested that physical abuse and psychological abuse are differently related to internalizing and externalizing symptoms (e.g., Coughlan et al., 2026; van Vugt et al., 2014), physical abuse rarely occurs without psychological abuse, making it difficult to analyze these effects separately (Descartes et al., 2020).

Specifically, our associations between abuse and internalizing symptoms were consistent between informants, which highlights the stronger effect that threat experiences may have on youth's functioning and internalizing symptoms (McLaughlin & Sheridan, 2016; McLaughlin et al., 2014; Miller et al., 2018), recognized by youth and their caregivers in care. In fact, although the internalizing symptoms related to abusive experiences may be less noticed (Gearing et al., 2015; Magalhães & Camilo, 2023; Rescorla et al., 2013), this association also appeared in the caregiver's reports, which may suggest that these symptoms may have become more evident through their impact on youth's daily psychological functioning (Djurovic et al., 2024; Pereira & Barros, 2019). In contrast, the association between physical and psychological abuse and externalizing symptoms seems to differ according to the informant, being only significant when symptoms were reported by youth. Therefore, self-report may be more sensitive to capturing the association between abuse and externalizing symptoms. This finding suggests that caregivers' reports of youth externalizing symptoms were not directly predicted by abuse, but rather may be influenced by other factors, such as relational or contextual factors. One of these factors may be the quality of interpersonal relationships, such as the relationship between the youth and their primary caregiver in care. Specifically, a supportive relationship, involving sensitivity and companionship has been associated with fewer behavioral problems in youth placed in residential care (Costa et al., 2020). Providing social support may help youth dealing with emotional and behavioral challenges, which in turn might foster youth's adaptation to residential care (Costa et al., 2020; Hoffnung Assouline & Attar-Schwartz, 2020). On the

other side, a poor quality of this relationship has been related to more adjustment difficulties, including behavioral problems (Hoffnung Assouline & Attar-Schwartz, 2020).

In addition, Silva and colleagues (2021) suggested that the caregivers' perceptions of organizational context in residential care, such as engagement, stress, and centralization, were related to their reports of youth's externalizing symptoms through the quality of the relationship between youth and their primary caregiver in care. Specifically, experiencing a negative organizational context may negatively affect the quality of the relationship with the youth and, consequently, exacerbate youth's externalizing problems reported by caregivers (Silva et al., 2021). Furthermore, according to Calheiros and colleagues (2025), the quality of the relationships with peers and friends is also important for youth's emotional health, especially during adolescence and for youth placed in residential care. However, these youth may experience some stigma from peers outside the residential care and may have some difficulties in integrating into peer groups in the residential care home (Ridge & Millar, 2000). These factors may lead to more interpersonal conflicts and lower quality of peer relations, with youth having a higher likelihood of interacting with peers with violent or delinquent behaviors, and, therefore, being more involved in behavioral problems (Calheiros et al., 2025; Dishion et al., 2004). Therefore, caregivers' reports of externalizing symptoms may reflect these behaviors and youth's current functioning and interpersonal relationships in the residential care setting, rather than merely an outcome of their prior abusive experiences.

Contrarily, neglect did not show significant associations nor in the correlations nor in the regression model, after controlling for the other variables, which is consistent with previous evidence (e.g., Imai et al., 2021; Magalhães & Camilo, 2023), highlighting that child neglect is harder to detect in comparison to abuse (Hildyard & Wolfe, 2002; Tang et al., 2022). Furthermore, these findings might be explained by the outcomes analyzed in the current study (Magalhães & Camilo, 2023), as experiences of deprivation, such as some types of neglect, affect mainly cognitive systems (McLaughlin & Sheridan, 2016) and academic outcomes (Eriksson et al., 2018), and do not directly affect emotional reactivity systems, such as in threat experiences (e.g., abuse), which often predict both internalizing and externalizing symptoms (McLaughlin & Sheridan, 2016; McLaughlin et al., 2014; Miller et al., 2018). Some authors proposed that these relationships may be explained by other variables. For example, Miller and colleagues (2018) proposed that neglect was only related to externalizing symptoms through deficits in verbal abilities. For internalizing symptoms, these associations may be explained by the adoption of maladaptive coping strategies, such as self-blame (Tanzer et al., 2021) and rumination (Zhang et al., 2024). Moreover, children and youth victims of neglect tend to have

more difficulties in recognizing emotions, due to the poor environment for emotion learning, provided by neglectful parents (Pollak et al., 2000; Sullivan et al., 2008), which may explain the absence of association between neglect and psychopathology reported by youth themselves. Furthermore, neglectful experiences are usually associated with chronic exposures, which may lead to negative and cumulative effects that may appear later in life and adulthood (Hildyard & Wolfe, 2002; Tang et al., 2022). Finally, specifically, the absence of association between psychological neglect and youth's psychopathology may also be partially explained by the fact that in The Child Maltreatment Severity Questionnaire (Calheiros, Silva, & Magalhães, 2021), items that evaluate lack of supervision are included in the psychological neglect dimension. The literature indicates that supervisory neglect has been associated with fewer internalizing and externalizing problems, compared to other forms of neglect (Pears et al., 2008; Petrenko et al., 2012; Raviv et al., 2010), considering that it may involve less deprivation of caregivers' inputs, and may be related to psychopathology through even more indirect cognitive, social and contextual factors (Hildyard & Wolfe, 2002; Knutson et al., 2004; Logan-Greene et al., 2025).

Although there were no significant total effects of neglect on youth's psychopathology in the regression model, gender significantly moderated those associations. Therefore, boys and girls may respond differently when exposed to experiences of neglect (Keyes et al., 2012). Specifically, for girls, the association between physical neglect and internalizing symptoms reported by their primary caregiver in residential care was positive, suggesting that this type of neglect may be associated with greater girls' emotional problems. In fact, neglected children typically remain passive and tend to display feelings of helplessness in response to stress (Hildyard & Wolfe, 2002; Tang et al., 2022). This is particularly critical for girls, who are socialized to attend more to their emotions and generally present more emotional awareness, compared to boys (Bailen et al., 2019; McNeill & Zeman, 2021), which may lead to heightened emotional sensitivity and, consequently, more difficulties in emotional regulation and feelings of guilt after neglectful experiences (Levkovich et al., 2025; Tanzer et al., 2021). Consequently, girls are more vulnerable to adopting maladaptive coping strategies, such as rumination and self-blame, which are strongly related to internalizing symptoms, such as anxiety and depression (Levkovich et al., 2025; Martínez-Líbano et al., 2025; Tanzer et al., 2021; Zhang et al., 2024). This is consistent with studies indicating that neglectful experiences, in particular physical neglect, may predict internalizing symptoms through factors such as maladaptive coping strategies (Tanzer et al., 2021; Zhang et al., 2024).

In contrast, and surprisingly, for boys, the associations between physical neglect and psychopathology were consistently negative, which are non-consistent with some previous

studies (e.g., Li et al., 2019; Prachason et al., 2024) and possibly suggest that physical neglect may not be the strongest predictor of these symptoms in boys, contrarily to abusive experiences. Specifically, the significant and negative association between physical neglect and internalizing symptoms reported by caregivers, may reflect the less visibility of neglect effects in boys, as well as some caregivers' gender expectations and perceptions about emotional regulation and expression (Kroll et al., 2025), as boys are socialized to express their emotions outward, engaging in more externalizing behaviors rather than internalizing symptoms (Card et al., 2008; Dong et al., 2024; Guassi Moreira, 2021). Consequently, this may lead to caregivers' lower sensitivity to boys' internalizing symptoms after neglectful experiences, contributing to the normalization of these symptoms (Carlén et al., 2022), which are also less visible and harder to detect (Hildyard & Wolfe, 2002). The significant and negative association between physical neglect and youth's reports of externalizing symptoms may be explained by positive opposition self-representations (Silva & Calheiros, 2020). Specifically, when physical needs are not fulfilled, youth may develop coping mechanisms to promote positive self-representations and a sense of control, such as becoming more passive, withdrawn (Dubowitz, 2009), less confident (Hornor, 2014) and less defiant, and, consequently, less likely to engage in behavior problems (Silva & Calheiros, 2020). Although these processes are not exclusive to boys, they may help explain the negative association found between physical neglect and youth's externalizing symptoms among boys. In addition, youth exposed to neglect, especially boys (Carlén et al., 2022), tend to have more difficulty in recognizing and identifying their own mental health problems and emotions (Pollak et al., 2000; Sullivan et al., 2008), and may also minimize their externalizing symptoms to promote stability in placement settings and to avoid placement changes (Ferraro et al., 2025).

Regarding psychological neglect, there was a negative relationship between this type of neglect and internalizing symptoms reported by caregivers in residential care, only among girls, suggesting that for caregivers, physical neglect and psychological and physical abuse may better explain girls' internalizing symptoms. Interestingly, this result is inconsistent with several studies (e.g., van Vugt et al., 2014), which might suggest that psychological neglect seems to be underestimated by professionals (Kumari, 2020). The absence of physical signs and recognition may make youth who were exposed to lack of love, nurturing and emotional responsiveness, especially girls, learn to suppress emotional needs and to adopt compliant and silent behaviors, normalizing their experience, which in turn may result in "invisible wounds" (Sulstarova et al., 2025), even less noticed by caregivers (Kumari, 2020). Therefore, this negative association between psychological neglect and internalizing symptoms reported by

caregivers should not be interpreted as psychological neglect reducing internalizing symptoms in girls, but it may reflect the limited visibility and, consequently, the caregivers' lower sensitivity to psychological neglect's effects (Kumari, 2020), especially internalizing symptoms (Magalhães & Camilo, 2023; Rescorla et al., 2013). Additionally, among girls, none of the types of child maltreatment measured were significantly related to externalizing symptoms. However, the number of previous placements was positively related to girls' reports of externalizing symptoms, suggesting that placement instability may be more related to these symptoms in girls than previous maltreatment. Specifically, some authors proposed that girls, compared to boys, might value more their interpersonal relationships, which may increase their vulnerability to relationship disruptions that happen with placement changes, which in turn might explain greater behavior problems (Hébert & Lanctôt, 2016).

4.1. Limitations and Implications for Research and Practice

Although this study provides innovative evidence to this field, these findings should be discussed and interpreted considering some limitations. First, the cross-sectional design of the present study did not allow causal inferences between child maltreatment experiences and psychopathology. As such, further longitudinal designs are needed to infer causal associations. However, it is important to state that child maltreatment experiences were assessed using the care workers' reports focusing on maltreatment prior to the placement of youth in care, and the mental health outcomes were assessed considering the last six months.

Second, considering that it is challenging to access and recruit youth placed in residential care to research, the present study focuses on a small sample of youth placed in generalist residential care homes, therefore, findings should not be generalized to maltreated youth who were placed in another type of residential facility (e.g., therapeutic care homes) or to maltreated youth who were not placed in residential care settings. Future research would benefit from using a larger and more representative sample. Furthermore, studies could also explore the associations between child maltreatment experiences and psychopathology in youth placed in residential care, compared to other samples, such as youth in foster care, clinical samples or even general populations.

Third, this study did not include all types of child maltreatment, such as interparental violence or sexual abuse, not allowing a more comprehensive understanding of these phenomena and their associations with youth's mental health outcomes. Additionally, specific characteristics of child maltreatment were not assessed, such as duration or chronicity, or the children's age of onset. According to Moussavi and colleagues (2022), child maltreatment may

be associated with different difficulties according to the specific stage of life when these experiences happened. Therefore, future research would benefit from controlling these variables. Moreover, this study did not measure poly-victimization, which is common, especially among youth placed in residential care (Descartes et al., 2020), and may explain some of the associations found in the current study. Thus, studies should examine the association between different types of child maltreatment and youth's psychopathology, considering poly-victimization. Fourth, this study did not assess the attachment style or the quality of the relationship between the youth and their primary caregivers in care, which may have influenced the agreement in the report of youth's psychopathology, as well as the associations explored (e.g., Ehrlich et al., 2011; Gearing et al., 2015). Future studies should examine the role of these characteristics. Fifth, this study did not analyze the underlying processes from child maltreatment experiences to youth's psychopathology. Therefore, more investigations are needed to clarify these pathways and factors involved, considering that a more comprehensive understanding allows the development of prevention and intervention plans focused on youth's needs. Additionally, there is a need for studies that focus on identifying and developing effective interventions and strategies to address the mental health problems and difficulties of these youth (Jozefiak et al., 2016). Consequently, this may help improve youth's mental health while entering and staying in residential care (Harris et al., 2025).

Sixth, in this study, child maltreatment experiences were assessed only by care workers, which may be complemented with the perspective of youth. Although care workers may provide essential information about maltreatment, based on case records (Negriff et al., 2017), these may not cover all the crucial information regarding all types of child maltreatment experienced by youth and, consequently, may underestimate their prevalence (Magalhães & Camilo, 2023; Mendle et al., 2013). Additionally, some authors revealed that there is generally some variability in the way that care workers document this information (Fallon et al., 2010). Consequently, psychopathology symptoms may also vary according to the type of measurement of child maltreatment (Sierau et al., 2017). As such, future studies should combine the information from care workers with self and other-reports to assess child maltreatment experiences and youth's psychopathology more accurately, especially in residential care. Also, this study only analyzed internalizing and externalizing symptoms as mental health problems, however, in future research it may be relevant to examine other outcomes of child maltreatment, such as executive and cognitive functioning (Institute of Medicine & National Research Council, 2014), including verbal abilities (Miller et al., 2018), and academic performance (Eriksson et al., 2018; Zhang et

al., 2025), especially when analyzing child neglect (Eriksson et al., 2018; Magalhães & Camilo, 2023).

Lastly, in this study, we measured youth's biological sex (male/female) rather than gender, although we have used the term 'gender' throughout the dissertation to align with the terminology used in the literature. However, we recognize that gender is conceptually distinct from sex, and considering that sexual and gender minorities are prevalent in residential care (Baams et al., 2019), it may be relevant in the future to examine the role of gender identity and other aspects of sexual diversity in the associations between child maltreatment and mental health problems (Cotton et al., 2020).

Despite these limitations, the present study has many strengths and provides important innovative findings related to the mental health of maltreated youth placed in residential care. First, this study provides a novel comprehension of the different associations between youth's experiences of child maltreatment and their internalizing and externalizing symptoms, highlighting that childhood adversity experiences have risks to the youth's mental health (Magalhães & Camilo, 2023), using a multi-informant approach regarding psychopathology. This analytic approach allows us to understand the differences between informants (i.e., youth versus their primary caregivers in care), which might inform practices and policies. As such, our findings suggest that it is important to develop and implement trauma-informed interventions, based on child maltreatment experiences, to meet the mental health needs of these youth (Olorunlambe et al., 2025). Specifically, based on these results, trauma-informed care approaches should focus on addressing mostly the consequences of child psychological and physical abuse. Considering that experiences of abuse affect regulatory systems, especially related to emotions, with more reactivity, hypervigilance and difficulties in responses of fear, residential care must become a safe physical and emotional environment to promote the youth's recovery from child maltreatment. Physical environment should be calm and not involve physical restraints or punitive practices that may trigger experiences of abuse and, consequently, retraumatize the youth (Muskett, 2014). In addition, the youth's primary caregivers in care and the staff should promote the youth's capacity to regulate emotional and physical experiences, as well as their resilience by providing a separate space where youth can regulate themselves and develop self-regulation skills (Ames & Loebach, 2023; Kopec & Harte, 2020). Co-regulation may also promote the youth's learning to regulate their emotions through the caregiver's response, presence and support (Steinkopf et al., 2022).

Furthermore, the consistency and predictability of practices, routines, and caregivers are essential to promote a sense of safety in these youths. These factors may also promote the

quality of relationships between youth and their primary caregivers, as well as among peers. This kind of intervention should also actively involve the youth, resulting in a collaborative approach, promoting the opportunity for youth to participate and have control, and, therefore, the effectiveness of treatment and care (Purkey et al., 2018). Additionally, staff in care should be trained to recognize the symptoms and consequences of trauma and child maltreatment and to adopt interventions and practices that could minimize retraumatization (Ames & Loebach, 2023; Substance Abuse and Mental Health Services Administration, 2014).

Moreover, the current study also examined gender as a moderator, which provides a more comprehensive understanding of the different paths between child maltreatment and psychopathology among girls and boys. In fact, interventions delivered in residential care settings should be gender-sensitive, focusing not only on the child maltreatment experienced by youth but also on the symptoms and difficulties exhibited. According to the findings, both girls and boys who experienced child physical and psychological abuse may benefit from treatment and approaches that focus on internalizing symptoms. For girls exposed to physical neglect, these problems should also be targeted in treatment and care plans. In addition, there is a need to promote a more comprehensive assessment or diagnosis of youth's problems in residential care, preventing their misinterpretation, especially when problems are less visible and, consequently, preventing the use of inappropriate treatment (Gutterswijk et al., 2022). Furthermore, the present study also suggests that internalizing and externalizing symptoms may be related to other factors, such as the quality of relationships between youth and their caregivers and peers in care, as well as the stability in care, rather than only child maltreatment. Therefore, it is also important to consider the specific trajectories in the out-of-home care system to select the most effective intervention for each youth's specific needs (Gutterswijk et al., 2022). Moreover, caregivers and staff in residential care should be informed and sensitized to these gender differences through psychoeducation, for example (Cotton et al., 2020).

Additionally, findings highlight the need to reduce placement instability, considering its negative effect on youth mental health, especially among girls. As discussed before, placement changes and disruptions may result in the end of significant relationships and in transitory relationships, which may contribute to youth adopting externalizing behaviors to cope with distress (Maguire et al., 2024; Munro & Hardy, 2006; Strijker et al., 2008). Therefore, it may be beneficial to implement strategies to prevent placement difficulties and manage potential challenges (Konijn et al., 2019). Specifically, the youth's participation in decision-making should be promoted (Chambers et al., 2018), considering that the lack of participation can increase negative mental health outcomes, such as oppositional behavior and passivity

(Riemersma et al., 2023). Since behavior problems can also lead to placement changes (Aarons et al., 2010), interventions to reduce these problems are fundamental, such as trauma-informed care approaches discussed before, ensuring that placement changes only occur when strictly necessary (Chambers et al., 2018). Additionally, staff and professionals in residential care should benefit from training to build positive relationships with the youth, as well as to promote an adequate response to the youth's negative reactions to placement changes. Furthermore, policymakers should focus on organizational factors to promote residential care stability, such as adequate work conditions for professionals in the child welfare system (e.g., lower caseloads) (Riemersma et al., 2023), promoting more adequate responses.

Furthermore, when placement changes happen, it is essential to support youth's transition and adaptation to the new residential care facility, involving and considering the perspectives of youth, their family, staff and care workers. Validating youth's feelings and fostering relational continuity is critical, including preserving siblings' relationships (Chambers et al., 2018) as well as, whenever possible, preserving community ties, promoting connectedness, such as joining clubs, volunteer groups, and activities, as well as the school context. Lastly, the preparation for transition should also continue after the youth leave the residential care home, providing support, resources and the possibility to return home or to call if needed (Tomlinson, 2021).

Conclusion

This study aimed to analyze the relationships between different forms of child maltreatment and psychopathology of youth living in residential care, based on a multi-informant approach, as well as to analyze the moderating role of gender in these associations.

The results showed that child maltreatment, especially child psychological and physical abuse, is a significant risk factor for mental health problems in youth placed in residential care. Moreover, the findings support the evidence that there are gender specific pathways in the association between child maltreatment and internalizing and externalizing symptoms, specifically when analyzing neglectful experiences. Finally, some associations between child maltreatment and psychopathology symptoms differed according to the informant of the symptoms (youth versus their primary caregivers in care).

These findings provide relevant empirical evidence and knowledge about the mental health of maltreated youth placed in residential care and support the development and implementation of individualized and gender-based prevention and intervention strategies, especially in residential care settings. In summary, the current study has several implications for treatment planning and legal decisions.

Sources

Law No. 147/1999 of the Assembly of the Republic (1999*). Republic Diary: n.º 204/1999, Series I-A*. https://diariodarepublica.pt/dr/legislacao-consolidada/lei/1999-34542475

References

Aarons, G. A., James, S., Monn, A. R., Raghavan, R., Wells, R. S., & Leslie, L. K. (2010). Behavior problems and placement change in a national child welfare sample: A prospective study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *49*(1), 70–80. https://doi.org/10.1016/j.jaac.2009.09.005

Achenbach, T. M. (1991). *Manual for the child behavior checklist/4-18 and 1991 profile.* University of Vermont Department of Psychiatry.

Águila-Otero, A., Bravo, A., Santos, I., & del Valle, J. F. (2020). Addressing the most damaged adolescents in the child protection system: An analysis of the profiles of young people in therapeutic residential care. *Children and Youth Services Review*, *112*, Article 104923. https://doi.org/10.1016/j.childyouth.2020.104923

American Psychiatric Association (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). American Psychiatric Publishing.

Ames, R. L., & Loebach, J. E. (2023). Applying trauma-informed design principles to therapeutic residential care facilities to reduce retraumatization and promote resiliency among youth in care. *Journal of Child & Adolescent Trauma*, *16*(4), 805–817. https://doi.org/10.1007/s40653-023-00528-y

Åsen, M. E., Schalinski, I., Lehmann, S., Stian Lydersen, Timo Von Oertzen, & Greger, H. K. (2024). Child maltreatment in young adults with residential youth care background: Prevalence and post-placement trends. *Child Abuse & Neglect*, *157*, Article 107074. https://doi.org/10.1016/j.chiabu.2024.107074

Asscher, J. J., Van der Put, C. E., & Stams, G. J. J. M. (2015). Gender differences in the impact of abuse and neglect victimization on adolescent offending behavior. *Journal of Family Violence*, *30*(2), 215–225. https://doi.org/10.1007/s10896-014-9668-4

Avdibegović, E., & Brkić, M. (2020). Child neglect: Causes and consequences. *Psychiatria Danubina*, *32*(3), 337-342.

Baams, L., Wilson, B. D. M., & Russell, S. T. (2019). LGBTQ Youth in unstable housing and foster care. *Pediatrics*, *143*(3), Article e20174211. https://doi.org/10.1542/peds.2017-4211

Bader, D., & Frank, K. (2025). Gender moderates the relationship between child maltreatment and mental health disorders in the Canadian population. *Child Abuse and Neglect*, *167*. Article 107570. https://doi.org/10.1016/j.chiabu.2025.107570

Bailen, N. H., Green, L. M., & Thompson, R. J. (2019). Understanding emotion in adolescents: A review of emotional frequency, intensity, instability, and clarity. *Emotion Review*, *11*(1), 63-73. https://doi.org/10.1177/1754073918768878

Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication*, *28*(3), 12–29. https://doi.org/10.1111/j.1460-2466.1978.tb01621.x

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development.* Basic Books.

Calheiros, M. M., Rodrigues, A. F., Camilo, C., & Silva, C. S. (2025). Friendship quality and mental health of youth in residential care: The moderating role of individual and contextual variables. *Child & Youth Care Forum*, *54*, 959-981. https://doi.org/10.1007/s10566-024-09847-z

Calheiros, M. M., Silva, C. S., & Patrício, J. N. (2020). Maltreatment and youth self-representations in residential care: The moderating role of individual and placement variables. *Children and Youth Services Review*, *116*, Article 105230. https://doi.org/10.1016/j.childyouth.2020.105230

Calheiros, M. M., Silva, C. S., & Magalhães, E. (2021). Child Maltreatment Severity Questionnaire (MSQ) for professionals: Development, validity, and reliability evidence. *Assessment*, *28*(5), 1397-1417. https://doi.org/10.1177/1073191119890030

Calheiros, M. M., Silva, C. S., Patrício, J. N., & Carvalho, H. (2021). Youth in residential care: A cross-sectional mediation analysis of youth's perceptions of their social images, self-representations, and adjustment outcomes. *Frontiers in Psychology*, *12*, Article 744088. https://doi.org/10.3389/fpsyg.2021.744088

Campos, J., Barbosa-Ducharne, M., Dias, P., Rodrigues, S., Martins, A. C., & Leal, M. (2019). Emotional and behavioral problems and psychosocial skills in adolescents in residential care. *Child and Adolescent Social Work Journal*, *36*(3), 237–246. https://doi.org/10.1007/s10560-018-0594-9

Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development*, *79*(5), 1185-1229. https://doi.org/10.1111/j.1467-8624.2008.01184.x

Carlén, K., Suominen, S., Augustine, L., Saarinen, M. M., Aromaa, M., Rautava, P., Sourander, A., & Sillanpää, M. (2022). Teenagers' mental health problems predict probable mental diagnosis 3 years later among girls, but what about the boys?. *Child and Adolescent Psychiatry and Mental Health*, *16*, Article 41. https://doi.org/10.1186/s13034-022-00473-y

Cecil, C., Viding, E., Fearon, P., Glaser, D., & McCrory, E. J. (2017). Disentangling the mental health impact of childhood abuse and neglect. *Child Abuse & Neglect*, *63*, 106-119. https://doi.org/10.1016/j.chiabu.2016.11.024

Chambers, R. M., Crutchfield, R. M., Willis, T. Y., Cuza, H. A., Otero, A., Harper, S. G. G., & Carmichael, H. (2018). “It's just not right to move a kid that many times:” A qualitative study of how foster care alumni perceive placement moves. *Children and Youth Services Review*, *86*, 76-83. https://doi.org/10.1016/j.childyouth.2018.01.028

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, *7*(3), 309–319. https://doi.org/10.1037/1040-3590.7.3.309

Collin-Vézina, D., Coleman, K., Milne, L., Sell, J., & Daigneault, I. (2011). Trauma experiences, maltreatment-related impairments, and resilience among child welfare youth in residential care. *International Journal of Mental Health and Addiction*, *9*, 577-589. https://doi.org/10.1007/s11469-011-9323-8

Costa, M., Melim, B., Tagliabue, S., Mota, C. P., & Matos, P. M. (2020). Predictors of the quality of the relationship with caregivers in residential care. *Children and Youth Services Review*, *108*, Article 104579. https://doi.org/10.1016/j.childyouth.2019.104579

Cotton, S. M., Rice, S., Moeller-Saxone, K., Magnus, A., Harvey, C., Mihalopoulos, C., Humphreys, C., Murray, L., Halperin, S., McGorry, P. D., & Herrman, H. (2020). Sex differences in psychological distress, behavioural and emotional problems, and substance use in young people in out-of-home care. *Child & Family Social Work*, *25*(2), 325–336. https://doi.org/10.1111/cfs.12688

Coughlan, B., Duschinsky, R., Bakermans-Kranenburg, M. J., Bakkum, L., Skinner, G. C. M., Markham, A., Beckwith, H., & van Ijzendoorn, M. H. (2026). Sequelae of child maltreatment: Umbrella synthesis of 148 meta-analyses on the mental health correlates. *JCPP Advances*, Article e70081. https://doi.org/10.1002/jcv2.70081

del Valle, J. F. & Bravo, A. (2013). Current trends, figures and challenges in out of home child care: An international comparative analysis. *Psychosocial Intervention*, *22*(3), 251-257. https://doi.org/10.5093/in2013a28

Descartes, C. H., Maharaj, P. E., Quammie, M., Mills, J., Ramesar, M., & Pulwarty, H. (2020). It’s never one type: The co-occurrence of child abuse and neglect among children living in community residences in Trinidad. *Journal of Child and Adolescent Trauma*, *13*(4), 419–427. https://doi.org/10.1007/s40653-019-00293-x

Dishion, T. J., Nelson, S. E., Winter, C. E., & Bullock, B. M. (2004). Adolescent friendship as a dynamic system: Entropy and deviance in the etiology and course of male antisocial behavior. *Journal of Abnormal Child Psychology*, *32*(6), 651–663. https://doi.org/10.1023/B:JACP.0000047213.31812.21

Dishion, T. J., Nelson, S. E., Winter, C. E., & Bullock, B. M. (2004). Adolescent friendship as a dynamic system: Entropy and deviance in the etiology and course of male antisocial behavior. Journal of Abnormal Child Psychology, 32(6), 651–663. https://doi.org/10.1023/B:JACP.0000047213.31812.21

Djurovic, T., Suri, A., & Andrade, B. F. (2024). Youth internalizing symptoms are associated with youth and caregiver readiness to engage in mental health treatment. *Translational Issues in Psychological Science*, *10*(4), 374–387. https://doi.org/10.1037/tps0000441

Doerfler, L. A., Toscano, P. F., Jr., & Connor, D. F. (2009). Sex and aggression: The relationship between gender and abuse experience in youngsters referred to residential treatment. *Journal of Child and Family Studies*, *18*, 112-122. https://doi.org/10.1007/s10826-008-9212-3

Dong, C., Wang, Z., Jia, F., Tian, H., Zhang, Y., Liu, H., Yu, X., Wang, L., & Fu, Y. (2024). Gender differences in the association between childhood maltreatment and the onset of major depressive disorder. *Journal of Affective Disorders*, *351*(15), 111-119. https://doi.org/10.1016/j.jad.2024.01.249

Dubowitz, H. (2009). Tackling child neglect: A role for pediatricians. *Pediatrics Clinics of North America*, *56*(2), 363-378. https://doi.org/10.1016/j.pcl.2009.01.003

Dvir, Y., Ford, J. D., Hill, M., & Frazier, J. A. (2014). Childhood maltreatment, emotional dysregulation, and psychiatric comorbidities. *Harvard Review of Psychiatry*, *22*(3), 149-161. https://doi.org/10.1097/HRP.0000000000000014

Ehrlich, K. B., Cassidy, J., & Dykas, M. J. (2011). Reporter discrepancies among parents, adolescents, and peers: Adolescent attachment and informant depressive symptoms as explanatory factors. *Child Development*, *82*(3), 999–1012. https://doi.org/10.1111/j.1467-8624.2010.01530.x

Emmerich, O. L. M., Wagner, B., Heinrichs, N., & van Noort, B. M. (2024). Lifetime victimization experiences, depressiveness, suicidality, and feelings of loneliness in youth in care. *Child Abuse and Neglect*, *154*, Article 106870. https://doi.org/10.1016/j.chiabu.2024.106870

Eriksson, M., Ghazinour, M., & Hammarström, A. (2018). Different uses of Bronfenbrenner's ecological theory in public mental health research: What is their value for guiding public mental health policy and practice? *Social Theory & Health*, *16*, 414-433. https://doi.org/10.1057/s41285-018-0065-6

Fallon, B., Trocmé, N., Fluke, J., MacLaurin, B., Tonmyr, L., & Yuan, Y. Y. (2010). Methodological challenges in measuring child maltreatment. *Child Abuse & Neglect*, *34*(1), 70–79. https://doi.org/10.1016/j.chiabu.2009.08.008

Farley, T. M., McWey, L. M., & Ledermann, T. (2021). Trauma and violence as predictors of internalizing and externalizing symptoms of youth in residential child welfare placements. *Journal of Family Violence*, *36*(2), 249–258. https://doi.org/10.1007/s10896-020-00140-w

Felson, R. B., & Lane, K. J. (2009). Social learning, sexual and physical abuse, and adult crime. *Aggressive Behavior*, *35*(6), 489-501. https://doi.org/10.1002/ab.20322

Ferraro, A. C., Lepper-Pappan, H., & Connelly, S. (2025). Estimating the effects of placement changes on internalizing and externalizing symptoms. *Children and Youth Services Review*, *179*, Article 108563. https://doi.org/10.1016/j.childyouth.2025.108563

Fischer, S., Dölitzsch, C., Schmeck, K., Fegert, J. M., & Schmid, M. (2016). Interpersonal trauma and associated psychopathology in girls and boys living in residential care. *Children and Youth Services Review*, *67*, 203–211. https://doi.org/10.1016/j.childyouth.2016.06.013

Fleitlich, B., Loureiro, M., Fonseca, A., & Gaspar, F. (2005). Questionário de capacidades e dificuldades (SDQ-Por) [Strengths and Difficulties Questionnaire, Portuguese version]. Retrieved from http://www.sdqinfo.org

Gearing, R. E., Schwalbe, C. S., MacKenzie, M. J., Brewer, K. B., & Ibrahim, R. W. (2015). Assessment of adolescent mental health and behavioral problems in institutional care: Discrepancies between staff-reported CBCL scores and adolescent-reported YSR scores. *Administration and Policy in Mental Health and Mental Health Services Research*, *42*(3), 279–287. https://doi.org/10.1007/s10488-014-0568-y

Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *The Lancet*, *373*(9657), 68–81. https://doi.org/10.1016/s0140-6736(08)61706-7

González-García, C., & del Valle, J. F. (2021). El acogimiento residencial como una intervención socioeducativa y terapéutica: Lo que la investigación nos enseña. In C. S. Peixoto & M. S. Oliveira (Eds.), *Acolhimento residencial de crianças e jovens em perigo: Conceitos, prática e intervenção* (pp. 21-30). Pactor

Goodman, A., & Goodman, R. (2009). Strengths and Difficulties Questionnaire as a dimensional measure of child mental health. *Journal of the American Academy of Child and Adolescent Psychiatry*, *48*(4), 400–403. https://doi.org/10.1097/CHI.0b013e3181985068

Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*(11), 1337–1345. https://doi.org/10.1097/00004583-200111000-00015

Goodman, R., Meltzer, H., & Bailey, V. (1998). The Strengths and Difficulties Questionnaire: A pilot study on the validity of the self-report version. *European Child & Adolescent Psychiatry*, 7(3), 125-130. https://doi.org/10.1007/s007870050057

Gordon, C., Nguyen, P. T., Mitchell, A., & Tyler, P. (2023). Profiles of childhood adversity and associated psychopathology in youth entering residential care. *Psychological Trauma: Theory, Research, Practice, and Policy*, *15*(S1), S82-S91. https://doi.org/10.1037/tra0001325

Guassi Moreira, J. F., McLaughlin, K. A., & Silvers, J. A. (2021). Characterizing the network architecture of emotion regulation neurodevelopment. *Cerebral Cortex*, *31*(9), 4140–4150. https://doi.org/10.1093/cercor/bhab074

Gutman, L. M., & McMaster, N. C. (2020). Gendered pathways of internalizing problems from early childhood to adolescence and associated adolescent outcomes. *Journal of Abnormal Child Psychology*, *48*(5), 703–718. https://doi.org/10.1007/s10802-020-00623-w

Gutterswijk, R. V., Kuiper, C. H. Z., van der Horst, F. C. P., Jongerling, J., Harder, A. T., & Prinzie, P. (2022). Behavioural problems of adolescents in secure residential youth care: Gender differences and risk factors. *Child & Family Social Work*, *28*(2), 454-468. https://doi.org/10.1111/cfs.12976

Hagborg, J. M., Tidefors, I., & Fahlke, C. (2017). Gender differences in the association between emotional maltreatment with mental, emotional, and behavioral problems in Swedish adolescents. *Child Abuse & Neglect*, *67*, 249-259. https://doi.org/10.1016/j.chiabu.2017.02.033

Handwerk, M. L., Clopton, K., Huefner, J. C., Smith, G. L., Hoff, K. E., & Lucas, C. P. (2006). Gender differences in adolescents in residential treatment. *The American Journal of Orthopsychiatry*, *76*(3), 312–324. https://doi.org/10.1037/0002-9432.76.3.312

Harris, L. G., Higgins, D. J., Willis, M. L., Lawrence, D., Mathews, B., Thomas, H. J., Malacova, E., Pacella, R., Scott, J. G., Finkelhor, D., Meinck, F., Erskine, H. E., & Haslam, D. M. (2025). The prevalence and patterns of maltreatment, childhood adversity, and mental

health disorders in an Australian out-of-home care sample. *Child Maltreatment*, *30*(1), 42–54. https://doi.org/10.1177/10775595241246534

Hart, H., Lim, L., Mehta, M. A., Simmons, A., Mirza, K. A. H., & Rubia, K. (2018). Altered fear processing in adolescents with a history of severe childhood maltreatment: An fMRI study. *Psychological Medicine*, *48*(7), 1092-1101. https://doi.org/10.1017/S0033291716003585

Hébert, S. T., & Lanctôt, N. (2016). Association between unstable placement patterns and problem behaviors in adolescent girls. *Residential Treatment For Children & Youth*, *33*(3–4), 286–305. https://doi.org/10.1080/0886571X.2016.1246400

Hildyard, K. L., & Wolfe, D. A. (2002). Child neglect: Developmental issues and outcomes. *Child Abuse & Neglect*, *26*(6-7), 679–695. https://doi.org/10.1016/S0145-2134(02)00341-1

Hiller, R. M., Meiser-Stedman, R., Elliott, E., Banting, R., & Halligan, S. L. (2021). A longitudinal study of cognitive predictors of (complex) post-traumatic stress in young people in out-of-home care. *Journal of Child Psychology and Psychiatry*, *62*(1), 48-57. https://doi.org/10.1111/jcpp.13232

Hodge, A. I., & Yoder, J. R. (2017). The relationship between abusive experiences and staff controls in juvenile correctional facilities: The mediating effects of externalizing behavior. *Criminal Justice and Behavior*, *44(*10), 1281–1299. https://doi.org/10.1177/0093854817727796

Hoffnung Assouline, A. A., & Attar-Schwartz, S. (2020). Staff support and adolescent adjustment difficulties: The moderating role of length of stay in the residential care setting. *Children and Youth Services Review*, *110*, Article 104761. https://doi.org/10.1016/j.childyouth.2020.104761

Hong, K., Morelli, N. M., Garcia, J., Duong, J. B., Evans, M. C., Litrownik, A. J., & Villodas, M. T. (2022). Trajectories of adolescent psychopathology among youth who were maltreated and placed in out-of-home care. *Child Abuse and Neglect*, *128*, Article 105589. https://doi.org/10.1016/j.chiabu.2022.105589

Hornor G. (2014). Child neglect: Assessment and intervention. *Journal of Pediatric Health Care*, *28*(2), 186–192. https://doi.org/10.1016/j.pedhc.2013.10.002

Hostinar, C. E., & Gunnar, M. R. (2013). The developmental effects of early life stress: an overview of current theoretical frameworks. *Current Directions in Psychological Science*, *22*(5), 400-406. https://doi.org/10.1177/0963721413488889

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Imai, J., Sasayama, D., Kuge, R., Honda, H., & Washizuka, S. (2021). Hyperactive/impulsive symptoms and autistic traits in institutionalized children with maltreatment experience. *New Directions for Child and Adolescent Development*, *2021*(179), 29-39. https://doi.org/10.1002/cad.20445

Indias, S., Arruabarrena, I., & De Paúl, J. (2019). Child maltreatment, sexual and peer victimization experiences among adolescents in residential care. *Children and Youth Services Review*, *100*, 267–273. https://doi.org/10.1016/j.childyouth.2019.03.014

Institute of Medicine, & National Research Council. (2014). Consequences of child abuse and neglect. In A. C. Petersen, J. Joseph, & M. Feit (Eds.), *New directions in child abuse and neglect research* (pp. 111–157). National Academies Press

Instituto de Segurança Social (2025). *CASA 2024 - Relatório de caracterização anual da situação de acolhimento das crianças e jovens*. https://www.garantiainfancia.gov.pt/-/relatorio-casa-20-1

Iverson, K. M., McLaughlin, K. A., Adair, K. C., & Monson, C. M. (2014). Anger-related dysregulation as a factor linking childhood physical abuse and interparental violence to intimate partner violence experiences. *Violence and Victims*, *29*(4), 564–578. https://doi.org/10.1891/0886-6708.vv-d-12-00125

Jackson, M., & Short, S. E. (2018). Gender differences in biological function in young adulthood: An intragenerational perspective. *The Russell Sage Foundation Journal of the Social Sciences*, *4*(4), 98–119. https://doi.org/10.7758/rsf.2018.4.4.06

Jansen, A. (2010). Victim or troublemaker? Young people in residential care. *Journal of Youth Studies*, *13*(4), 423-437. https://doi.org/10.1080/13676261003801770

Jozefiak, T., Kayed, N. S., Rimehaug, T., Wormdal, A. K., Brubakk, A. M., & Wichstrøm, L. (2016). Prevalence and comorbidity of mental disorders among adolescents living in residential youth care. *European Child & Adolescent Psychiatry*, *25*(1), 33–47. https://doi.org/10.1007/s00787-015-0700-x

Kaçar-Başaran, S., & Kızıltepe, R. (2025). Associations of childhood maltreatment and emotion dysregulation with internalizing and externalizing symptoms: A transdiagnostic model. *Journal of Family Violence.* Advance online publication. https://doi.org/10.1007/s10896-025-00919-9

Kernreiter, J., Huscsava, K. C. Z. M., Fiala, M. M., & Felnhofer, C. A (2020). The anonymously adopted child: Impact of age and parental psychopathology on adoptees' mental health. *Children and Youth Services Review*, *119*, Article 105672. https://doi.org/10.1016/j.childyouth.2020.105672

Keyes, K. M., Eaton, N. R., Krueger, R. F., McLaughlin, K. A., Wall, M. M., Grant, B. F., & Hasin, D. S. (2012). Childhood maltreatment and the structure of common psychiatric disorders. *British Journal of Psychiatry*, *200*(2), 107–115. https://doi.org/10.1192/bjp.bp.111.093062

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). The Guilford Press.

Knutson, J. F., DeGarmo, D. S., & Reid, J. B. (2004). Social disadvantage and neglectful parenting as precursors to the development of antisocial and aggressive child behavior: Testing a theoretical model. *Aggressive Behavior*, *30*(3), 187–205. https://doi.org/10.1002/ab.20016

Konijn, C., Admiraal, S., Baart, J., van Rooij, F., Stams, G.-J., Colonnesi, C., Lindauer, R., & Assink, M. (2019). Foster care placement instability: A meta-analytic review. *Children and Youth Services Review*, *96*, 483–499. https://doi.org/10.1016/j.childyouth.2018.12.002

Kopec, D., & Harte, J. D. (2020). Design as the missing variable in trauma-informed schools. In E. Rossen (Ed.), *Supporting and educating traumatized students: A guide for school-based professionals* (pp. 343–358). Oxford University Press. https://doi.org/10.1093/med-psych/9780190052737.003.0019

Kroll, E., Hessdorf, S., Brandis, A., Kanopka, K., Kohlmeier, J., Heard, H., Zant, I., Stolzenbach, S., & Fenkel, C. (2025). Examining caregiver-adolescent symptom agreement and its influence on treatment outcomes: A quantitative analysis. *Frontiers in Psychology, 16,* Article 1676629. https://doi.org/10.3389/fpsyg.2025.1676629

Kumari V. (2020). Emotional abuse and neglect: time to focus on prevention and mental health consequences. *The British Journal of Psychiatry: The Journal of Mental Science*, *217*(5), 597–599. https://doi.org/10.1192/bjp.2020.154

Lee, B. R., & Thompson, R. (2009). Examining externalizing behavior trajectories of youth in group homes: Is there evidence for peer contagion?. *Journal of Abnormal Child Psychology*, *37*, 31–44. https://doi.org/10.1007/s10802-008-9254-4

Levkovich, I., Yatzkar, U., & Shenaar-Golan, V. (2025). Age and gender differences in emotional and behavioral functioning among youth referred to a psychiatric outpatient clinic at a public hospital. *Children*, *12*(6), 683. https://doi.org/10.3390/children12060683

Li, D., Chng, G. S., & Chu, C. M. (2019). Comparing long-term placement outcomes of residential and family foster care: A meta-analysis. *Trauma, Violence, & Abuse*, *20*(5), 653–664. https://doi.org/10.1177/1524838017726427

Llosada-Gistau J., Casas F., & Montserrat C. (2019) The subjective well-being of children in kinship care. *Psicothema*, *31*(2), 149–155. https://doi.org/10.7334/psicothema2018.302

Logan-Greene, P., Lee, J. S., Zhu, J., & Wilding, G. E. (2025). Neglect and adolescent internalizing mental health: Testing competing longitudinal hypotheses. *Development and Psychopathology*, *37*(4), 2161–2171. https://doi.org/10.1017/S0954579424001767

Luo, Z., Chen, Y., & Epstein, R. A. (2025). Risk factors for child abuse and neglect: Systematic review and meta-analysis. *Public Health*, *241*, 89–98. https://doi.org/10.1016/j.puhe.2025.01.028

Magalhães, E., Calheiros, M. M., & Costa, P. (2016). To be or not to be a rights holder: Direct and indirect effects of perceived rights on psychological adjustment through group identification in care. *Children and Youth Services Review*, *71*, 110–118. https://doi.org/10.1016/j.childyouth.2016.10.039

Magalhães, E., & Camilo, C. (2023). Maltreatment history and internalizing and externalizing symptoms in out-of-home care: A three-level meta-analysis. *European Journal of Psychology Applied to Legal Context*, *15*(2), 89–103. https://doi.org/10.5093/ejpalc2023a10

Maguire, D., May, K., McCormack, D., & Fosker, T. (2024). A systematic review of the impact of placement instability on emotional and behavioural outcomes among children in foster care. *Journal of Child & Adolescent Trauma*, *17*, 641–655. https://doi.org/10.1007/s40653-023-00606-1

Martínez-Líbano, J., Serey, A. K., & Barahona-Fuentes, G. (2025). Emotional regulation and subjective well-being in adolescents: A systematic review. *Mental Health: Global Changes Journal*, *8*(1). https://doi.org/10.56508/mhgcj.v8i1.240

McGuire, A., Cho, B., Huffhines, L., Gusler, S., Brown, S., & Jackson, Y. (2018). The relation between dimensions of maltreatment, placement instability, and mental health among youth in foster care. *Child Abuse and Neglect*, *86*, 10–21. https://doi.org/10.1016/j.chiabu.2018.08.012

McLaughlin, K. A., & Sheridan, M. A. (2016). Beyond cumulative risk: A Dimensional approach to childhood adversity. *Current Directions in Psychological Science*, *25*(4), 239–245. https://doi.org/10.1177/0963721416655883

McLaughlin, K. A., Sheridan, M. A., & Lambert, H. K. (2014). Childhood adversity and neural development: Deprivation and threat as distinct dimensions of early experience. *Neuroscience and Biobehavioral Reviews*, *47*, 578–591. https://doi.org/10.1016/j.neubiorev.2014.10.012

McNeil, D., & Zeman, J. (2021). Adolescents' reluctance to express emotions: Relations to parent emotion socialization. *Journal of Child and Family Studies*, *30*(1), 107–120. https://doi.org/10.1007/s10826-020-01861-8

Mendle, J., Leve, L. D., Van Ryzin, M., & Natsuaki, M. N. (2014). Linking childhood maltreatment with girls' internalizing symptoms: Early puberty as a tipping point. *Journal of Research on Adolescence*, *24*(4), 689-702. https://doi.org/10.1111/jora.12075

Miller, A. B., Sheridan, M. A., Hanson, J. L., McLaughlin, K. A., Bates, J. E., Lansford, J. E., Pettit, G. S., & Dodge, K. A. (2018). Dimensions of deprivation and threat, psychopathology, and potential mediators: A multi-year longitudinal analysis. *Journal of Abnormal Psychology*, *127*(2), 160–170. https://doi.org/10.1037/abn0000331

Mishra, A. A., Schwab-Reese, L. M., & Murfree, L. V. (2020). Adverse childhood experiences associated with children's patterns of out of home placement over time and subsequent negative outcomes during adolescence. *Child & Youth Care Forum*, *49*(2), 247–263. https://doi.org/10.1007/s10566-019-09526-4

Mohamed Ali, O., Vandermeer, M. R. J., Sheikh, H. I., Joanisse, M. F., & Hayden, E. P. (2019). Girls' internalizing symptoms and white matter tracts in Cortico-Limbic circuitry. *NeuroImage: Clinical*, *21*, Article 101650. https://doi.org/10.1016/j.nicl.2018.101650

Monette, S., Long, M., O'Leary, A., Cyr, C., Terradas, M. M., & Couture, S. (2025). Mental disorder diagnoses and symptoms and functional impairment in school-age children in the care of child protective services. *Child Abuse & Neglect*, *159*, Article 170155. https://doi.org/10.1016/j.chiabu.2024.107155

Moreno-Manso, J. M., García-Baamonde, M. E., Guerrero-Barona, E., Godoy-Merino, M. J., Guerrero-Molina, M., & Barbosa-Torres, C. (2023). Externalizing and internalizing symptoms and coping strategies in young victims of abuse. *Current Psychology*, *42*(7), 5580-5589. https://doi.org/10.1007/s12144-021-01996-x

Moussavi, Y., Wergeland, G. J., Bøe, T., Haugland, B. S. M., Larsen, M., & Lehmann, S. (2022). Internalizing symptoms among youth in foster care: Prevalence and associations with exposure to maltreatment. *Child Psychiatry & Human Development*, *53*(2), 375-388. https://doi.org/10.1007/s10578-020-01118-x

Muniz, C. N., Fox, B., Miley, L. N., Delisi, M., Cigarran, G. P. II., & Birnbaum, A. (2019). The effects of adverse childhood experiences on internalizing versus externalizing outcomes. *Criminal Justice and Behavior*, *46*(4), 568–589. https://doi.org/10.1177/0093854819826213

Munro, E. R., & Hardy, A. (2006). *Placement stability: A review of the literature.* Department for Education and Skills. https://hdl.handle.net/2134/2919

Muskett C. (2014). Trauma-informed care in inpatient mental health settings: A review of the literature. *International Journal of Mental Health Nursing*, *23*(1), 51–59. https://doi.org/10.1111/inm.12012

Myers, J. E. B. (2011). *The APSAC handbook on child maltreatment.* SAGE Publications

National Research Council, & Institute of Medicine (2014). Consequences of child abuse and neglect. In A. C. Petersen, J. Joseph, & M. Feit (Eds.), *New directions in child abuse and neglect research* (pp. 111–160). The National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK195985/pdf/Bookshelf_NBK195985.pdf

Negriff, S., Schneiderman, J. U., & Trickett, P. K. (2017). Concordance between self-reported childhood maltreatment versus case record reviews for child welfare-affiliated adolescents: Prevalence rates and associations with outcomes. *Child Maltreatment*, *22*(1), 34-44. https://doi.org/10.1177/1077559516674596

Olorunlambe, W., Adeniyi, S., Israel, A. A., Ford, J. D., Charak, R., Galdamez, M., & Jud, A. (2025). Child maltreatment and psychopathology among institutionalized and incarcerated adolescents in Nigeria: A latent class analysis approach. *Child Abuse & Neglect*, *163*, Article 107425. https://doi.org/10.1016/j.chiabu.2025.107425

Pears, K. C., Kim, H. K., & Fisher, P. A. (2008). Psychosocial and cognitive functioning of children with specific profiles of maltreatment. *Child Abuse & Neglect*, *32*(10), 958–971. https://doi.org/10.1016/j.chiabu.2007.12.009

Pereira, A. I., & Barros, L. (2019). Parental cognitions and motivation to engage in psychological interventions: A systematic review. *Child Psychiatry and Human Development*, *50*(3), 347–361. https://doi.org/10.1007/s10578-018-0852-2

Petrenko, C. L., Friend, A., Garrido, E. F., Taussig, H. N., & Culhane, S. E. (2012). Does subtype matter? Assessing the effects of maltreatment on functioning in preadolescent

youth in out-of-home care. *Child Abuse & Neglect*, *36*(9), 633-644. https://doi.org/10.1016/j.chiabu.2012.07.001

Pollak, S. D., Cicchetti, D., Hornung, K., & Reed, A. (2000). Recognizing emotion in faces: Developmental effects of child abuse and neglect. *Developmental Psychology*, *36*(5), 679–688. https://doi.org/10.1037/0012-1649.36.5.679

Prachason, T., Mutlu, I., Fusar-Poli, L., Menne-Lothmann, C., Decoster, J., van Winkel, R., Collip, D., Delespaul, P., de Hert, M., Derom, C., Thiery, E., Jacobs, N., Wichers, M., van Os, J., Rutten, B. P. F., Pries, L. K., & Guloksuz, S. (2024). Gender differences in the associations between childhood adversity and psychopathology in the general population. *Social Psychiatry and Psychiatric Epidemiology*, *59*(5), 847–858. https://doi.org/10.1007/s00127-023-02546-5

Purkey, E., Patel, R., & Phillips, S. P. (2018). Trauma-informed care: Better care for everyone. *Canadian Family Physician*, *64*(3), 170–172. https://pmc.ncbi.nlm.nih.gov/articles/PMC5851387/

Rabley, S., Preyde, M., & Gharabaghi, K. (2014). A survey of adolescents' perceptions of their relationships with nonparental caregivers in group home settings: An attachment perspective. *Children And Youth Services Review*, *40*, 61-70. http://dx.doi.org/10.1016/j.childyouth.2014.02.012

Raviv, T., Taussig, H. N., Culhane, S. E., & Garrido, E. F. (2010). Cumulative risk exposure and mental health symptoms among maltreated youth placed in out-of-home care. *Child Abuse & Neglect*, *34*(10), 742–751. https://doi.org/10.1016/j.chiabu.2010.02.011

Rescorla, L. A., Ginzburg, S., Achenbach, T. M., Ivanova, M. Y., Almqvist, F., Begovac, I., Bilenberg, N., Bird, H., Chahed, M., Dobrean, A., Döpfner, M., Erol, N., Hannesdottir, H., Kanbayashi, Y., Lambert, M. C., Leung, P. W. L., Minaei, A., Novik, T. S., Oh, K. J., … Verhulst, F. C. (2013). Cross-informant agreement between parent-reported and adolescent self-reported problems in 25 societies. *Journal of Clinical Child and Adolescent Psychology*, *42*(2), 262–273. https://doi.org/10.1080/15374416.2012.717870

Ridge, T., & Millar, J. (2000). Excluding children: Autonomy, friendship and the experience of the care system. *Social Policy and Administration*, *34*(2), 160–175. https://doi.org/10.1111/1467-9515.00183

Riemersma, Y., Harder, A., Zijlstra, E., Post, W., & Kalverboer, M. (2023). Static and dynamic factors underlying placement instability in residential youth care: A scoping review. *Children and Youth Services Review*, *155*, Article 107298. https://doi.org/10.1016/j.childyouth.2023.107298

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, *8*(2), 23-74. https://doi.org/10.23668/psycharchives.12784

Scott, J. G., Malacova, E., Mathews, B., Haslam, D. M., Pacella, R., Higgins, D. J., Meinck, F., Dunne, M. P., Finkelhor, D., Erskine, H. E., Lawrence, D. M., & Thomas, H. J. (2023). The association between child maltreatment and mental disorders in the Australian Child Maltreatment Study. *Medical Journal of Australia*, *218*(S6), S26-S33. https://doi.org/10.5694/mja2.51870

Sierau, S., Brand, T., Manly, J. T., Schlesier-Michel, A., Klein, A. M., Andreas, A., Garzón, L. Q., Keil, J., Binser, M. J., von Klitzing, K., & White, L. O. (2017). A multisource approach to assessing child maltreatment from records, caregivers, and children. *Child Maltreatment*, *22*(1), 45–57. https://doi.org/10.1177/1077559516675724

Silva, B., Magalhães, E., Pinheiro, M., Baptista, J., & Ferreira, M. (2025). Maltreatment and mental health of adolescents in residential care: The moderating role of peer attachment.

International Journal on Child Maltreatment, *8*, 543-565. https://doi.org/10.1007/s42448-025-00240-4

Silva, C. S., & Calheiros, M. M. (2020). Maltreatment experiences and psychopathology in children and adolescents: The intervening role of domain-specific self-representations moderated by age. *Child Abuse & Neglect*, *99*, Article 104255. https://doi.org/10.1016/j.chiabu.2019.104255

Silva, C. S., Calheiros, M. M., Carvalho, H., & Magalhães, E. (2021). Organizational social context and psychopathology of youth in residential care: The intervening role of youth–caregiver relationship quality. *Applied Psychology*, *71*(2), 564-586. https://doi.org/10.1111/apps.12339

Silva, T. C., Graña, J. L., & González-Cieza, L. (2014). Self-reported physical and emotional abuse among youth offenders and their association with internalizing and externalizing psychopathology. *International Journal of Offender Therapy and Comparative Criminology*, *58*(5), 590–606. https://doi.org/10.1177/0306624x12474975

Simão, A., & Nunes, C. (2026). Psychological adjustment of adolescents in residential care: A multi-informant analysis of youth and caregiver reports. *Adolescents*, *6*(2), Article 30. https://doi.org/10.3390/adolescents6020030

Sölva, K., Haselgruber, A., & Lueger-Schuster, B. (2020). Latent classes of childhood maltreatment in children and adolescents in foster care: Associations with ICD-11 PTSD and complex PTSD. *European Journal of Psychotraumatology*, *11*(1), Article 1832757. https://doi.org/10.1080/20008198.2020.1832757

Springer, K. W., Sheridan, J., Kuo, D., & Carnes, M. (2003). The long-term health outcomes of childhood abuse. *Journal of General Internal Medicine*, *18*(10), 864–870. https://doi.org/10.1046/j.1525-1497.2003.20918.x

Steinkopf, H., Nordanger, D., Stige, B., & Milde, A. M. (2022). Experiences of becoming emotionally dysregulated. A qualitative study of staff in youth residential care. *Child & Youth Services*, *43*(2), 187–205. https://doi.org/10.1080/0145935X.2021.1918541

Strijker, J., Knorth, E. J., & Knot-Dickscheit, J. (2008). Placement history of foster children: A study of placement history and outcomes in long-term family foster care. *Child Welfare, 87*(5), 107–124. https://www.researchgate.net/publication/24377235

Substance Abuse and Mental Health Services Administration. (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach*. HHS Publication No. (SMA) 14-4884. https://www.health.ny.gov/health_care/medicaid/program/medicaid_health_homes/docs/samhsa_trauma_concept_paper.pdf

Sullivan, M. W., Bennett, D. S., Carpenter, K., & Lewis, M. (2008). Emotion knowledge in young neglected children. *Child Maltreatment*, *13*(3), 301–306. https://doi.org/10.1177/1077559507313725

Sulstarova, A., Bodinaku, B., Zahaj, S., Sula, G., & Hysi, G. (2025). Trauma, emotional neglect, and developmental vulnerability in children: Evidence from Albania. *Behavioral Sciences*, *15*(12), Article 1608. https://doi.org/10.3390/bs15121608

Tang, S., Ports, K. A., Stone, D. M., & Lin, H. C. (2022). The mediating role of internalizing and externalizing symptoms in the association between child neglect and suicide attempt in adulthood. *International Journal of Injury Control and Safety Promotion*, *29*(1), 112–122. https://doi.org/10.1080/17457300.2021.2007406

Tanzer, M., Salaminios, G., Morosan, L., Campbell, C., & Debbané, M. (2021). Self-blame mediates the link between childhood neglect experiences and internalizing symptoms in low-risk adolescents. *Journal of Child & Adolescent Trauma*, *14*(1), 73–83. https://doi.org/10.1007/s40653-020-00307-z

Tomlinson, P. (2021). Transition planning: Leaving a residential care home. In C. S. Peixoto & M. S. Oliveira (Eds.). *Acolhimento residencial de crianças e jovens em perigo: Conceitos, prática e intervenção* (pp. 217-232). Pactor

Tremblay, R. E., Vitaro, F., & Côté, S. M. (2018). Developmental origins of chronic physical aggression: A bio-psycho-social model for the next generation of preventive interventions. *Annual Review of Psychology*, *69*, 383–407. https://doi.org/10.1146/annurev-psych-010416-044030

United Nations Children's Fund (2024). *Transmonee analytical series: Pathways to better protection - Taking stock of the situation of children in alternative care in Europe and Central Asia*. https://www.unicef.org/eca/media/33251/file/Pathways%20to%20better%20protection.pdf

van Vugt, E., Lanctôt, N., Paquette, G., Collin-Vézina, D., & Lemieux, A. (2014). Girls in residential care: From child maltreatment to trauma-related symptoms in emerging adulthood. *Child Abuse & Neglect*, *38*(1), 114-122. https://doi.org/10.1016/j.chiabu.2013.10.015

Varnish, C., Phillips, A. R., Tallam Laxman, S., Maxwell, N., Halligan, S. L., & Button, K. S. (2025). The relationship between placement instability and mental health among care-experienced children and young people: UK systematic review and meta-analysis. *The British Journal of Psychiatry: The Journal of Mental Science*, 1–10. https://doi.org/10.1192/bjp.2025.10375

Wellman, M. M. (1993). Child sexual abuse and gender differences: Attitudes and prevalence. *Child Abuse & Neglect*, *17*(4), 539–547. https://doi.org/10.1016/0145-2134(93)90028-4

Whitted, K. S., Delavega, E., & Lennon-Dearing, R. (2013). The youngest victims of violence: Examining the mental health needs of young children who are involved in the child welfare and juvenile justice systems. *Child and Adolescent Social Work Journal*, *30*(3), 181–195. https://doi.org/10.1007/s10560-012-0286-9

World Health Organization (2022). *Responding to child maltreatment: A clinical handbook for health professionals*. https://iris.who.int/server/api/core/bitstreams/87944065-4f4f-45d2-9bd8-abab73320e4f/content

World Health Organization (2024, November 5). *Child maltreatment*. Retrieved September 15, 2025, from https://www.who.int/news-room/fact-sheets/detail/child-maltreatment

Yoon, M., Cho, S., & Yoon, D. (2019). Child maltreatment and depressive symptomatology among adolescents in out-of-home care: The mediating role of self-esteem. *Children and Youth Services Review*, *101*, 255-260. https://doi.org/10.1016/j.childyouth.2019.04.015

Zeanah, C. H., & King, L. S. (2022). Practice and policy regarding child neglect: Lessons from studies of institutional deprivation. *Annual Review of Developmental Psychology*, *4*, 399-422. https://doi.org/10.1146/annurev-devpsych-121020-031658

Zhang, Y., Cecil, C. C. A. M., Barker, E. D., Mori, S., & Lau, J. Y. F. (2019). Dimensionality of early adversity and associated behavioral and emotional symptoms: Data from a sample of Japanese institutionalized children and adolescents. *Child Psychiatry and Human Development, 50*, 425-438. https://doi.org/10.1007/s10578-018-0850-4

Zhang, Y., Xu, W., McDonnell, D., & Wang, J. L. (2024). The relationship between childhood maltreatment subtypes and adolescent internalizing problems: The mediating role of maladaptive cognitive emotion regulation strategies. *Child Abuse & Neglect*, *152*, Article 106796. https://doi.org/10.1016/j.chiabu.2024.106796

Zhang, X., Ngai, S. S., & Wang, Z. (2025). The social-emotional consequences of child neglect: Exploring the interpersonal and psychological pathways. *Children and Youth Services Review*, *179*, Article 108596. https://doi.org/10.1016/j.childyouth.2025.108596

Appendix

Appendix A – Artificial Intelligence Use

Artificial Intelligence tools, such as ChatGPT (OpenAI, version GPT - 5.5) and Grammarly (v1.2.266.1896), were used to ensure linguistic and textual clarity, including translation and grammatical revision. ChatGPT was also used to generate some preliminary ideas and to support some bibliographic research. All the information was critically reviewed by the student.

Form

Use of Artificial Intelligence (AI) Tools in Academic Work

1. Declaration and Transparency

☐ No AI tools were used in the manuscript.

☒ AI tools were used in the manuscript and:

☒ I have explicitly declared the use of AI tools in the manuscript.

☒ I have indicated the name of the tool and, where possible, the version.

☒ I have clearly described the purpose for which the AI was used (e.g. linguistic review, analysis support, preliminary organisation, data simulation).

2. Authorship and Responsibility

☒ I take full responsibility for the text, data, analyses, interpretations and references.

3. The Use of AI in Writing and Scientific Content

☒ AI was not used to fabricate data, empirical results or conclusions.

☒ Any text generated or rewritten with the aid of AI has been critically reviewed by me.

☒ All references and citations have been checked manually (there are no fictitious or inaccurate references).

4. AI as Part of the Method (Tick only if applicable)

☐ The use of AI as part of the method was justified from the perspective of knowledge production.

☐ The procedures have been described clearly and transparently.

☐ Limitations, potential biases and human interpretative decisions have been made explicit.

5. Qualitative Research, Interviews and Ethnography (Tick only if applicable)

☐ AI did not have access to full interview transcripts, field notes, ethnographic diaries or participant observations.

☐ AI was not used to generate discourse, empirical narratives or simulated ethnographic descriptions.

Any AI support for qualitative analysis (e.g. exploratory suggestions for codes or themes) was:

☐ Described in the Methodology section;

☐ Interpreted and validated by the researchers;

☐ Used in accordance with the terms of informed consent.

6. Data Protection and Ethics

☒ No personal, sensitive or identifiable data was entered into AI tools.

☒ The use of AI complies with the ethical standards of scientific research and with the applicable data protection legislation.

Date: 23/06/2026

Name: Maria Carolina da Silva Henriques

Signature: Assinado por: Maria Carolina da Silva Henriques
Num. de Identificação: BI15217845
Data: 23-06-2026 11:27:09 +01:00

CHAVE MÓVEL