INSTITUTO
UNIVERSITÁRIO
DE LISBOA

Resilience of adolescents in residential care: from risk to protection

Micaela Sofia da Silva Pinheiro

Doctorate in Psychology

Supervisor:
Doctor Eunice Vieira Magalhães, Assistant Researcher
Iscte-Instituto Universitário de Lisboa

Co-supervisor:
Doctor Joana Isabel Baptista, Assistant Professor
Iscte-Instituto Universitário de Lisboa

December, 2024

CIÊNCIAS SOCIAIS
E HUMANAS

Department of Social and Organizational Psychology

Resilience of adolescents in residential care: from risk to protection

Micaela Sofia da Silva Pinheiro

Doctorate in Psychology

Jury:

Doctor Joana Alexandre, Assistant Professor, Iscte-Instituto Universitário de Lisboa
Doctor Maria Manuela Calheiros, Full Professor, Faculdade de Psicologia, Universidade de Lisboa
Doctor Maria Barbosa Ducharne, Associate Professor, Universidade do Porto
Doctor Francisco Simões, Assistant Researcher, Iscte-Instituto Universitário de Lisboa
Doctor Eunice Vieira Magalhães, Assistant Researcher, Iscte-Instituto Universitário de Lisboa

December, 2024

To my Mom, Grandparents and Marco

To all of children and adolescents in residential care

Acknowledgements

I would like to express my deep appreciation and gratitude to…

…My supervisor, Professor Eunice Magalhães for your support, dedication, and guidance throughout this project. Her expertise, patience, and generosity in sharing knowledge was fundamental to the development of this work. Thank you for challenging me to think critically, for your valuable suggestions, and for believing in my potential. Your guidance was essential not only for the success of this dissertation but also for my academic and personal growth. I also thank you for your empathy and understanding in difficult times, and for being an inspiration of professionalism and ethics in all your actions.

… Professor Joana Baptista, my co-supervisor, for your encouragement, commitment, and orientation during the entire project. Thanks also to share your exceptional theories and ideas. The development of this dissertation has been greatly aided by your knowledge and availability.

I feel very privileged for the opportunity to learn from you, Professors Eunice Magalhães and Joana Baptista. I sincerely thank you for everything. The lessons I learned from you will undoubtedly be with me for the rest of my life.

…Professor Cláudia Camilo for your indispensable statistical and emotional support.

…Professor Francisco Simões for the feedback and suggestions in these four years of work.

…All members of the CED group, CIS and ISCTE-IUL for provided the context for the development of my skills as a researcher.

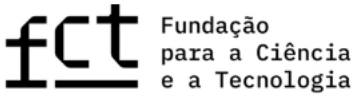
…All colleagues and friends who shared scientific meetings, knowledge, travels, and long and deep conversations. Special thanks to my colleague and friend, Sofia Ferreira.

All master's students who helped me with data collection. A special thanks to Ana Marta Frazão, Beatriz Silva and Raquel Rodrigues.

…All adolescents in residential care, professionals, and residential care settings for the availability and close collaboration in the data collection that made this thesis possible.

…All those who cared for me during these four years of my life. Thank you for your unconditional love and patience. Thanks for special to my family and friends.

This work was supported by the Portuguese Foundation for Science and Technology [Fundação para a Ciência e Tecnologia] through an individual doctoral grant (Grant Number: 2021. 06556.BD; https://doi.org/10.54499/2021.06556.BD



Resumo

Os jovens em acolhimento residencial constituem um grupo vulnerável, com dificuldades psicológicas e comportamentais devido a experiências potencialmente traumáticas. A investigação sobre esta população tem-se centrado fundamentalmente nos fatores que explicam as dificuldades de saúde mental, mais do que nas trajetórias de resiliência. Esta dissertação teve como objetivo identificar os fatores de proteção associados à saúde psicológica dos adolescentes em acolhimento residencial, ancorada no Modelo de Portfólio de Resiliência. Foram implementados cinco estudos: (1) uma revisão sistemática dos fatores de proteção para a saúde psicológica dos adolescentes em acolhimento residencial, (2) uma meta-análise com o objetivo de identificar os fatores de proteção que produzem maior tamanho de efeito na saúde psicológica dos adolescentes, (3) um estudo qualitativo com adolescentes, e (4) um estudo qualitativo com profissionais em acolhimento residencial, ambos centrados nas suas perspetivas sobre o conceito de resiliência e os fatores de proteção associados à saúde psicológica, e (5) um estudo quantitativo, baseado numa perspetiva multi-informante (i.e., adolescentes e profissionais) e diferentes medidas (i.e., auto-relato e tarefas) para identificar fatores protetores da saúde mental. No geral, os resultados destes estudos sugerem que a autorregulação, as estratégias de coping e o suporte dos profissionais e da família estão positivamente associados à saúde psicológica dos adolescentes em acolhimento residencial, e que a saúde psicológica é mais do que a ausência de sintomas. Estes estudos realçam a importância das variáveis individuais e contextuais para a resiliência em acolhimento residencial, o que pode informar a prática, a investigação e as políticas neste contexto.

Palavras-chave: Resiliência, Acolhimento Residencial, Adolescentes, Adaptação

Categorias e códigos de classificação APA PsycINFO:
2800 Psicologia do Desenvolvimento
2900 Processos Sociais & Questões Sociais
3300 Saúde & Tratamento de Saúde Mental & Prevenção

Abstract

Young people in residential care are a vulnerable group with significant psychological and behavioral difficulties because of their past traumatic experiences. As such, research on this population has focused on the factors that explain mental health difficulties, overlooking resilience trajectories. This dissertation aimed to identify the protective factors associated with the psychological health of adolescents in residential care anchored in the Resilience Portfolio Model. Five studies were implemented, including (1) a systematic review of the protective factors for psychological health of adolescents in residential care, (2) a meta-analysis of the protective factors that produce the largest effect size in adolescents' psychological health, (3) a qualitative study with adolescents, and (4) a qualitative study with care workers, both focused on their perspectives about the resilience concept and protective factors associated with psychological health, and (5) a quantitative study, based on multi-informants (i.e., adolescents and professionals) and different measures (i.e., self-report and tasks) to identify protective factors of mental health. Overall, the findings of these studies suggest that self-regulation, coping strategies, and staff and family support are positively associated with adolescents' psychological health in residential care and that psychological health is more than the absence of symptoms. These studies highlight the importance of both individual and contextual variables in the resilience in residential care, which may inform practice, research, and policy in this field.

Keywords: Resilience, Residential Care, Adolescents, Adaptation

APA PsycINFO Classification Categories and Codes:

2800 Developmental Psychology

2900 Social Processes & Social Issues

3300 Health & Mental Health Treatment & Prevention

Table of Contents

Index of Figures

Index of Tables

Introduction

Young people in residential care represent a highly vulnerable group with high levels of psychological and behavioral difficulties due to their past traumatic experiences (e.g., abuse and neglect) (Dalmaso et al., 2024). A considerable body of empirical evidence on the risk factors and mental problems of young people in residential care has been provided (e.g., Bonet et al., 2020; Campos et al., 2019; Dosil et al., 2021; Magalhães & Camilo, 2023; Westlake et al., 2023). Nevertheless, little is known about factors associated with positive adaptation and psychological health in this context (Lou et al., 2018; Magalhães & Calheiros, 2020; Magalhães et al., 2021b). Considering that previous trauma and adversity cannot be changed, we need to deepen our knowledge about the protective factors that foster psychological health of adolescents in residential care (Lou et al., 2018). Literature focusing on protective factors that foster healthy adaptation of young people in residential care is still scarce and for this reason, the current thesis aims to address the following research question: *"Which protective factors foster the psychological health of adolescents in residential care?"*. To address this research question, five studies were developed based on the Resilience Portfolio Model (Grych et al., 2015).

The Resilience Portfolio Model proposed by Grych and colleagues (2015) explains resilience after victimization suggesting that psychological health outcomes result from the dynamic role of protective factors. Moreover, according to this model, mental health or psychological health is more than the absence of symptoms (e.g., Grych et al., 2015; Magalhães & Calheiros, 2017; Magalhães, 2024). To the best of our knowledge, no studies have explored resilience in residential care anchored on a comprehensive and holistic theoretical approach such as the Resilience Portfolio Model. Including this strengths-based model (Grych et al., 2015), we can provide a more complete perspective about adaptation in alternative care, shifting the focus from mental illness to potential strengths. Therefore, this dissertation provides empirical evidence regarding resilience in the out-of-home care system. Specifically, identifying the strengths or protective factors that improve young people's overall psychological health, can help adolescents in residential care and address the out-of-home care system issues (e.g., suggesting the best professionals' practices). The evidence gathered from this perspective might provide insights on better protecting young people, building resilience, and fostering prevention and intervention strategies, thereby reducing the need for intensive

and expensive interventions later. Furthermore, each adolescent in residential care experiences a single resilience journey. Therefore, identifying protective factors allows for individualizing care practices, which means providing personalized support that aligns with each adolescent's assets and resources available and their particular needs. This not only helps adolescents handle their current situation but also fosters readiness to leave the system and face challenges in the future. Thus, research focused on protective factors at different levels (e.g., individual and contextual), including different dimensions of psychological health (i.e. psychopathology, well-being, and competence), mixed-methods (i.e., systematic and meta-analytic reviews, qualitative and quantitative studies), and multi-informants (i.e., adolescents and professionals) approaches may provide critical insights to identify the best interventions in residential care.

To address our main research question, this dissertation is organized in eight chapters (Figure 1). In Chapter I, we present the conceptualization and theoretical frameworks focused on the resilience concept, with a particular emphasis on the Resilience Portfolio Model (Grych et al., 2015) which guided the current work. Next, we outline the protective factors associated with adolescents' psychological health while considering earlier research (e.g., Grych et al., 2015; Masten & Narayan, 2021; Ungar et al., 2023; Yule et al., 2019). Finally, in this chapter, we provide an overview on the international and national perspectives about residential care settings, as this is the developmental context explored in our studies. After outlining the state-of-the-art (Chapter I), the main research problems, and the research objectives (Chapter II) that we aim to address, we move to the empirical studies presented in the following five chapters.

Chapter III presents a systematic review (Study 1) aimed at determining the resilience portfolio (Grych et al., 2015) that may be positively associated with adolescents' psychological health in residential care (Pinheiro et al., 2021). This systematic review offers a first step toward expanding the knowledge about protective factors for psychological health. Although the studies reviewed in this first study documented associations between protective factors and psychological health, little is known about the specific contribution of each protective factor to the resilience of adolescents in residential care, especially when considering different outcomes. Thus, since Study 1 did not allow us to calculate the magnitude of the effect sizes (because we included qualitative, quantitative, and mixed-methods research), and this topic was not mapped in earlier meta-analyses (e.g., Yule et al., 2019), in Chapter IV, we present a meta-analysis (Study 2). This second study aimed at identifying the protective factors that produce the largest effect sizes on adolescents' psychological health in residential care.

The findings from Study 1 (systematic review) showed that most studies in this field adopted quantitative designs (e.g., Aguilar-Vafaie et al., 2014; Cordovil et al., 2011). As such, more mixed methods and qualitative evidence are needed (Pinheiro et al., 2021) to obtain an in-depth understanding about resilience in residential care, considering both young people and staff's perspectives in residential care. Thus, considering that adolescents are experts in their lives (Calheiros et al., 2011) in Chapter V, we present a qualitative study (Study 3), through which evidence was gathered using a semi-structured interview aimed at hearing adolescents' voices, listening to their perspectives on resilience, and identifying the protective factors relevant to their psychological health. Furthermore, the findings from Study 2 (meta-analysis) highlighted the role of professionals in all dimensions of psychological health in adolescents' psychological health (i.e., psychopathology, well-being and competence). Professionals' perspectives and representations play a significant role in shaping their practices in these settings, which is crucial for adolescents' recovery (Calheiros et al., 2011; Pinheiro et al., 2022). Moreover, the relationship with staff in residential care is unique and may significantly impact young people's psychological adjustment (Pinheiro et al., 2021; 2022). As such, in Chapter VI, we present a qualitative study (Study 4) focused on the care workers' perspectives about the protective factors associated with psychological health of adolescents living in residential care.

Finally, in Chapter VII, we present a quantitative study (Study 5), including adolescents and professionals in residential care, aimed at examining the protective factors associated with adolescents' mental health. Including multiple informants (e.g., adolescents and professionals in residential care) and multi-methods (e.g., self-report measures and tasks) is crucial because it yields a more thorough and comprehensive understanding (Johnson & Onwuegbuzie, 2004) of resilience phenomenon, improving the quality and credibility of the findings, and lowering the risk of obtaining a biased perspective about this topic (Podsakoff et al., 2003). This was the first study to combine two well-defined theoretical models: 1) the Dual Factor Model of Mental Health (Antaramian et al., 2011) and the Resilience Portfolio Model (Grych et al., 2015). Specifically, we sought to investigate the associations among contextual *resources* (i.e., attachment from parents, peers, and caregivers in residential care), *coping* strategies, and individual *assets* (i.e., cognitive skills, executive functioning, and mentalization), and mental health status.

The eighth and concluding chapter provides an integrated discussion of the findings of our five studies, emphasizing the key contributions of this dissertation, as well as its limitations and

implications for research, practice and policy. An outline of the theoretical background and the research problems addressed in this dissertation, and a list of all studies conducted are shown in Figure 1.

Figure 1

Schematic outline of this dissertation: theoretical background, research problems and objectives

Chapter I
Theoretical background

Research on youth in residential care (RC) has been focusing on the risk and on the psychopathology, overlooking the identification of protective factors and psychological health (well-being and competence).
Young people in RC often enter in care due to maltreatment and neglect; however, despite this adversity history, they might exhibit psychological health.

Chapter II
Research problems

The scarcity of studies:
- That identify protective factors for psychological health of adolescents in RC.
- That consider mental health as a multi-dimensional concept.
- Exploring resilience with adolescents in RC from a comprehensive and holistic theoretical approach (e.g., the Resilience Portfolio Model; Grych et al., 2015).
- Using qualitative designs that included the perspective of adolescents and the perspective of professionals in RC.
- Including multi-informants (i.e., adolescents, care workers and caregivers in RC).

Chapter III Objective 1	**Chapter IV** Objective 2	**Chapter V** Objective 3	**Chapter VI** Objective 4	**Chapter VII** Objective 5
To identify the protective factors or the resilience portfolio associated with adolescents' psychological health in RC.	To identify the protective factors that produce the *largest effect sizes* in adolescents' psychological health in RC.	To identify adolescents' perspectives on the concept of resilience and the protective factors for psychological health of adolescents in RC.	To identify care workers' perspectives on the concept of resilience and the protective factors for psychological health of adolescents in RC.	To identify protective factors associated with different mental health group profiles of adolescents in RC.
Study 1. Systematic review	Study 2. Meta-analysis	Study 3. Qualitative (adolescents)	Study 4. Qualitative (staff)	Study 5. Quantitative (adolescents and staff)

Chapter VIII
General Discussion

CHAPTER I

THEORETICAL BACKGROUND

Resilience

Resilience Conceptualization

The development of resilience as a concept is a fascinating journey reported in the history of psychology that represents a shift in emphasis from mental illness to mental health pathways (Shean, 2015). However, the literature reveals ambiguities in the definition of resilience, with varying terminology used across studies, such as (in)vulnerability (Luthar et al., 2000; Masten, 2001, 2012). Clarifying these differences is crucial to advancing accurate knowledge and achieving greater consistency in resilience research. Specifically, (in)vulnerability is an intrinsic quality of an individual, whereas resilience implies a process that may be enhanced and developed (Rutter, 1979). In terms of resilience conceptualization, some authors (Goldstein & Brooks, 2013; Wagnild & Young, 1993) view resilience as a personal trait or characteristic, whereas others (e.g., Garmezy et al., 1984; Luthar et al., 2000; Masten, 2011; Rutter, 1979; Ungar, 2005) define this concept as a dynamic process. From this second perspective, resilience is shaped by the interactions among stressors, risks, and protective factors, which together influence an individual's ability to adapt at a particular time.

In terms of resilience history, this idea mostly emerged in the field of developmental psychology between the 1940s and the 1950s (Masten & Narayan, 2021). Early studies have focused on the negative effects of traumatic events, especially those that occur in childhood, on mental health. Sigmund Freud and Anna Freud, for example, studied the psychological impact of war on children during and after World War II, showing that some children seemed to heal and operate fairly well in life, even after experiencing terrifying experiences (Masten, 2014; Masten & Narayan, 2021). Over time, resilience research has evolved through four distinct "waves", each marked by different approaches, aims, and methodologies (Wright et al., 2013).

The first wave (1970s-1980s) - *Identifying Resilient Individuals and Factors that Make a Difference* - aimed to identify factors (e.g., individual traits or characteristics and contextual resources) that helped individuals, particularly children, overcome risk or adversity (Masten, 2001). For instance, the *Kauai Longitudinal Study* by Emmy Werner was a prominent example of how some children born in high-risk environments (e.g., severe perinatal stress, low socioeconomic status, divorce, alcoholism, or mental illness) developed into well-adjusted adults (Shean, 2015; Werner & Smith, 1979). Her extensive research has identified protective factors at different levels, including individual characteristics (e.g., problem-solving skills and autonomy), family (e.g., family support), and community resources (e.g., peers, school, and

neighbors support) (Werner, 1997). This wave focused mainly on identifying the factors that might be associated with resilience outcomes, overlooking the mechanisms that explain the resilience process. In turn, the second wave (1980s-1990s) – *Embedding Resilience in Developmental and Ecological Systems, Understanding Resilience Processes* – focused more on clarifying the process by which protective factors foster resilience (Masten et al., 1990; Wright et al., 2013). This wave was significantly influenced by the work of researchers, such as Michael Rutter and Ann Masten, who explained that resilience should be understood as a dynamic process affected by the turning points of development and the availability of psychosocial resources that could counteract or moderate the effects of adversity (Masten et al., 1990; Wright & Masten, 2014; Wright et al., 2013). They argued that more than only identifying the factors that shielded and protected individuals, it is critical to understand how these factors (i.e., individual and contextual) operated to foster resilience over time (Goldstein & Brooks, 2013).

The third wave (1990s-2000s) of resilience research - *Interventions and Programs to Foster Resilience* - focused on developing tailored strategies to promote resilience, particularly among at-risk populations (Masten & Reed, 2002). This wave resulted from the lessons of the first two waves; therefore, it attempted to inform practical, preventative, and policy efforts to foster resilience to support vulnerable groups, such as children in the out-of-home, individuals who experience poverty, and trauma survivors (Goldstein & Brooks, 2013). These programs were often guided by ecological models, such as Bronfenbrenner's ecological theory (1979), which emphasized the importance of addressing resilience at multiple levels — individual, family, and community — to create a more supportive environment for these people. Additionally, the turning points of development were also considered a window of opportunity when intervention programs were designed (Wright et al., 2013). In this wave, adult populations (e.g., refugees, survivors of abuse, and those living with chronic illness) were included in the scope of resilience studies. A renowned researcher in the field, George Bonanno, examined individuals' resilience to sorrow and trauma, including natural catastrophes and loss. He disproved the conventional wisdom that major trauma invariably results in permanent psychological difficulties by demonstrating that there are multiple pathways to resilience that do not require intensive therapy (Bonnano, 2008).

Lastly, the four wave of resilience research - *Integrative and Multisystemic Approach* (from the 2000s to the present) – is characterized by the study of resilience as a complex system

involving many processes of interactions in different domains ranging from genetics and neurobiology to social and cultural contexts over the time (e.g., Grych et al., 2015; Masten, 2014; Ungar, 2013; Wright et al., 2013). In particular, understanding the molecular mechanisms underlying resilience - such as neuroplasticity, stress regulation, and gene-environment interactions - has become more pertinent (Luthar et al., 2006; Luthar & Brown, 2007; Wright et al., 2013). This wave benefited greatly from the work of researchers such as Suniya Luthar, who stressed the need to recognize the multidimensional nature of resilience, since the absence of psychopathology does not necessarily mean showing high well-being or competence. This means that individuals can exhibit competence in certain dimensions but not in others (Luthar et al., 2000); therefore, research recommends collecting data using a variety of measures to quantify resilience outcomes (e.g., Goldstein & Brooks, 2013; Grych et al., 2015).

In sum, the history of resilience in psychology reflects a significant shift in how psychologists' study and interpret individuals' adaptation, from focusing on an individual characteristic or personality trait to view resilience as a complex, dynamic, and multisystemic process across the lifespan. Specifically, various frameworks offer different lens for understanding resilience, ranging from a person and process approach (Masten, 2001; Masten & Narayan, 2021) to broader systems and cultural influences (Bennett et al., 2018; Goldstein & Brooks, 2013; Grych et al., 2015). Thus, in the current dissertation, resilience is conceptualized as a dynamic process involving both individual characteristics and contextual factors, allowing people to endure difficult experiences, grow and thrive (Grych et al., 2015; Masten & Narayan, 2021).

The Resilience Portfolio Model

Grych and colleagues (2015) proposed a theoretical framework that explains how individuals who face adversity adapt and thrive over the time, called the Resilience Portfolio Model (Grych et al., 2015). According to this model, mental health or Psychological Health covered positive affect, competence, psychopathology, and well-being outcomes. Therefore, it provides a multi-dimensional understanding of mental health, which is consistent with the assumption that suggests that achieving good or complete mental health requires more than the absence of psychological symptoms (Magalhães & Calheiros, 2017; Suldo et al., 2011). Also, this model provides valuable insights in this field as it integrates a set of theoretical assumptions from the literature on the positive psychology, post-traumatic growth, and coping, to provide a more accurate understanding of individuals' behaviors after adversity.

Positive psychology theories focus on individuals' skills and on how personal strengths foster individuals' well-being or psychological health (Masten, 2001; Grych et al., 2015). Thus, this model incorporates individual qualities identified in positive psychology (e.g., gratitude, compassion), broadening the scope of protective factors that have been examined in violence research (Grych et al., 2015). The literature about post-traumatic growth suggests that healthy outcomes emerge due to the individuals' exposure to stressful life events. Particularly, it allows an individual to find meaning in stressful or traumatic experiences which improve their perceptions of self, the world, and relationships (Tedeschi & Calhoun, 2004). Moreover, Grych et al. (2015) proposed that individuals' reactions to violence are determined by their appraisals of the situation, including beliefs about their capacity to cope with it and assessments of how dangerous it is. This assumption aligns with coping models, which propose that protective variables and strengths can influence appraisals and coping behavior. These pathways may provide avenues via which individual characteristics result in adaptive outcomes (Lazarus & Folkman, 1984). Thus, understanding the processes (e.g., behavioral, cognitive, and emotional) or coping strategies used by victims of violence to handle stressful situations is also an integrative part of this model (Grych et al., 2015).

From a social-ecological perspective (Bronfenbrenner, 1977), the Resilience Portfolio Model determines several key components, postulating that psychological health after exposure to adversity can be explained by the dynamic role of a set of protective factors and explaining how protective factors impact both appraisals and coping behavior (Grych et al. 2015). Thus, it explains mechanisms that promote positive and negative outcomes in individuals, rather than simply describing the personal attributes or resources that individuals may have in their lives (Grych et al., 2015). Specifically, the authors describe these protective factors as *Assets* and *Resources. Assets* are the individual's strengths that support healthy functioning, and *Resources* are sources of external context, which together, constitute each person's distinct "portfolio" of protective factors for resilience (Grych et al., 2015). Specifically, *Assets* are organized in 3 higher-order functional dimensions that are theoretically particularly significant for resilience: 1) regulatory strengths, 2) interpersonal strengths, and 3) meaning-making strengths. Along with self-regulation, regulatory strengths also include characteristics such as motivation, self-direction, self-efficacy, and cognitive abilities. Interpersonal strengths include qualities that enable people to establish and sustain healthy relationships, such as forgiveness, generosity, compassion, and thankfulness. Lastly, the qualities that enable people to find meaning in

adversity and are connected to their values, beliefs, objectives, and religiosity compose meaning-making strengths (Grych et al., 2015). *Resources* involve all aspects of social ecology, including supportive relationships and environmental factors. One way to conceptualize supportive relationships is in terms of the type of support provided (e.g., emotional, instrumental, and/or financial) by family, friends, or teachers across an individual's life or in terms of the quality of relationships and attachments bonds establish (e.g., between residential staff and young people; Pinheiro et al., 2022). On the other hand, environmental factors are associated with the opportunities that exist within an individual's community, such as nurturing schools and community services, as well as the cultural norms of a certain context (Grych et al., 2015).

Grych et al. (2015) stated that there are different ways in which this portfolio of protective factors either directly or indirectly promote positive functioning. A protective factor is "a predictor of better outcomes, particularly in situations of risk or adversity" (Wright et al., 2013, p. 17). In resilience field, a consistent set of protective factors associated with individual's healthy adaptation after traumatic experiences have been thoroughly studied (e.g., Bethell et al., 2016; Fritz et al., 2018; Grych et al., 2015; Masten & Narayan, 2021; Ungar et al., 2023; Yule et al., 2019). According to the authors, this might occur in four different ways. The first is known as the "*insulation effect"* which states that the presence of protective factors lowers the likelihood that people may encounter particular kinds of adversity. The second, known as the *"main effect",* indicates that protective factors (i.e., resources and assets) actively encourage positive outcomes, independent of how they are exposed to adversity. Third, protective factors can have a "*buffering effect*" on positive functioning which occurs when a protective factor decreases the effects of a stressful event on adjustment without improving functioning in the absence of the stressor. Finally, the authors explain the *"inoculation effects"* by proposing the hypothesis that mild stress exposure fosters the development of coping strategies, allowing the individual to cope with more severe stressful events that arise later in life (Grych et al., 2015).

In sum, these protective factors might operate at different levels (e.g., individual, family, community, cultural, and societal levels) (Grych et al., 2015; Masten & Narayan, 2021; Ungar et al., 2023; Wright et al., 2013). Examples of promotive and protective factors at the individual level (e.g., child characteriscts) include social and adaptable temperament in childhood, cognitive skills, problem-solving strategies, executive functions, social skills, emotional-regulation, self-confidence, self-esteem, self-efficacy, hope, and purpose in life (Grych et al., 2015; Fritz et al., 2018; Wright et al., 2013). Family characteristics, including stable and

supportive family contexts, harmonious interparental relationships, responsive caregivers, adequate parenting styles, positive sibling relationships, supportive extended family members, and socioeconomic advantages, are also protective (Grych et al., 2015; Fritz et al., 2018; Masten & Narayan, 2021; Wright et al., 2013). Regarding community characteristics, the literature suggests, for instance, the protective role of suitable neighborhood (safety and quality), low levels of community violence, reasonable housing, effective schools (e.g., well-trained teachers), and the involvement in extra-curricular activities (Grych et al., 2015; Fritz et al., 2018). Finally, protective factors are often rooted in cultural and societal characteristics, including protective child policies (e.g., childcare system), protection from political violence and low acceptance of violence (Wright et al., 2013).

An Overview of Residential Care

According to the United Nations Convention on the Rights of the Child (1989), children and adolescents have the right to be protected by state authority when they are temporarily or permanently removed from their family because of issues related to safety, parental conflict, maltreatment, and behavioral problems. For those, the solutions are sometimes out-of-home care measures, such as residential care. Residential care facilities are being used worldwide to meet the short-or long-term needs of young people (e.g. safety, development, and well-being) (James, 2017; Wright et al., 2019). It is challenging to accurately determine the exact number of young people in residential care because of the lack of consistent and up-to-date data in many countries. However, it is estimated that 2.7 million children and adolescents between the ages of 0 and 17 reside in residential care facilities (Petrowski et al., 2017).

In Portuguese context, the most recent available data show that 6446 children and adolescents were placed in residential care in 2023, of whom 84% (n=5409) were placed in non-specialized residential care facilities and the others in specialized facilities (e.g., 129 young people in therapeutic residential care and 200 young people in residential care facilities to foster their autonomy) (ISS, 2024). Most of these young people in residential care are male (52%), and adolescence are the most common age groups (ages ranging from 12-17; 49%). There is also a growing trend of individuals aged between 21 and 24 years in residential care because of the review of the Law for Child Protection, which expands the possibility of action for young people up to the age of 25, as long as they are in educational processes or professional training (Guerra, 2016). Approximately 30% of these young people show behavioral problems, 10% show clinical mental disability, and 6% show clinical mental problems. Around 40% of these

young people have regular psychological interventions, 28% have regular psychiatric interventions, and 29% use medication (child psychiatric or psychiatric) (ISS, 2024). As in other developed countries, adverse experiences such as neglect and maltreatment are among the main causes of removal from home in Portugal (ISS, 2024; Simkiss, 2012). Neglect was cited as the main reason for entering the out-of-home Portuguese system (around 70% of cases), followed by other unsafe situations (14%, e.g. temporary absence of support, deviant behaviors, abandonment), psychological abuse (12%), physical abuse (4%), and sexual violence (3%) (ISS, 2024).

The term "residential care" encompasses a broad spectrum of practices and policies that differ globally in terms of factors such as legislation, cultural contexts, historical backgrounds, community resources, and staff qualifications and training (Del Valle & Bravo, 2013; Rodrigues et al., 2014). Residential care may include orphanages, large-scale homes, small-group homes, children's villages, therapeutic residential care, and juvenile justice institutions (Lee & Barth, 2011). Despite these different terminologies, diversity among settings is also related to the services and practices offered (Leloux-Opmeer et al., 2016), the number of children and adolescents at home, the target audience (e.g., age, multiple types of traumas, specific mental needs, or substance abuse), the typology of the home (e.g., non-specialized, therapeutic, or autonomy) (Lee & Barth, 2011), and group care programs or intervention models (Dozier et al., 2014). Thus, worldwide, residential care is an alternative that has been influenced by cultural perceptions and ideas regarding the protection and care of children as well as the current child welfare systems and models in different regions (Petrowski et al., 2017).

The Portuguese law defines residential care as "*placing the child in the care of an establishment with the infrastructure, equipment, and permanent staff members that are appropriately qualified to give them the attention they need*" and *"is conceived as a measure whose implementation aims to provide care and adequately satisfy the physical, psychological, emotional and social needs and the effective exercise of their rights, favoring their integration into a safe socio-family context and promoting their education, well-being and integral development"* (Law No. 23/2023 and Decree No. 450/2023). The Portuguese childcare system has undergone several structural and functional changes over the last few decades. These changes are reflected in the current Law for Children's Protection - No. 23/2023 and Decree No. 450/2023 – with the fifth amendment to the Law for Child Protection approved by Law No. 147/99. This law defines a set of child protection measures that can be applied proportionally to ensure the safety and well-being of young people at risk. When it is possible to keep the child

in the family context, a measure to support the parents is applied. This measure aims to support biological families (e.g., parents) to improve parental capacity. Furthermore, when parents are unable to provide adequate conditions or a safety context, support can be provided by the extended family (e.g., grandparents, uncles) or to other suitable persons (e.g., friends or neighboord) to ensure safety and adequate conditions and prevent the need for more severe protective decisions. More restrictive protective decisions are described as out-of-home measures, typically involving placement in residential care homes (e.g., non-specialized, therapeutic homes, autonomy) and foster care.

Several efforts have been made to better protect young people who enter the childcare system, particularly out-of-home (e.g., non-specialized residential care homes; therapeutic homes). One of the most significant milestones was the first publication of the Law for Child Protection in 1999 (No. 147/1999). At this time, residential care facilities were arranged based on the expected length of care (e.g., short-term versus long-term placement) and the term “institutions” was used. The law has been revised several times since 1999. In 2015, there was a second significant amendment to this law (No. 142/2015) in response to issues and the needs of children and adolescents for educational and/or therapeutic intervention. As such, residential care facilities are arranged into specialized units with the following settings specified: emergency homes, residential care facilities for young people with serious mental problems that address therapeutic or educational needs, and autonomy apartments.

Moreover, the term “institutions” was replaced by "residential care homes", and their definition has been adjusted to better suit the needs of children and adolescents. In addition to the significant changes that have arisen, the childcare system in Portugal has undergone significant reforms and development in recent years, particularly, focusing on the organization and practices of residential care homes (Law No. 23/2023 and Decree No. 450/2023). In line with international recommendations, efforts have been made to organize residential care settings into smaller group homes (e.g., accommodate a maximum of 15 youths), no longer gender specific, meaning that siblings are no longer separated into different centers, residential care facilities should include a family oriented model of intervention as well as the selection and recruitment of qualified professionals (i.e., including care workers and caregivers) with a focus on reintegrating children in family settings whenever possible (Law No. 23/2023 and Decree No. 450/2023). Furthermore, according to the present law, an adolescent who is in danger can re-enter the childcare system upon reasonable request, starting before the age of 18

and lasting up to the age of 25, and only for the length of processes related to their professional or educational training as well as the establishment of an autonomy program that prepares them for leaving residential settings and their social integration (Law No. 23/2023 and Decree No. 450/2023).

Against this backdrop, it is evident that there is an effort to improve the functioning of these facilities, and the quality of the services provided. These successive changes to legislation progressively move from a functional logic, based on satisfying the basic needs of young people, to a therapeutic and family based model, focusing on providing structured support (e.g., emotional and instrumental support) to address and manage mental health issues (e.g., trauma, depression, and behavioral problems), fostering coping skills and positive interactions with peers and adults, encouraging personal growth, and focusing on the reintegration of young people into their families and in community (James et al., 2013; Whittaker et al., 2016).

In Portugal, residential care facilities are mostly private, with a cooperation agreement with state authorities, and are supervised by the welfare system (e.g., Social Security Institute units) (Rodrigues et al., 2014). To ensure the implementation of this definition, human resources within these facilities are normally organized into three multidisciplinary teams: 1) a care worker team (three professionals, one of which is the director), 2) a caregiver team (a minimum of ten professionals), and 3) a support team (two professionals). The care worker team includes a director and professionals from the field of psychology and social services who manage cases (e.g., diagnosing the child's situation, contacting families and schools, and preparing reports for entities with competence in matters of childhood and youth). The caregiver team includes professionals whose specific professional training is not mandatory and is normally made up of educational assistants. These professionals provide pedagogical support to children and adolescents and are responsible for their daily socio-educational routines. Furthermore, caregivers should be sensitive and establish attachment and significant relationships with children and adolescents that are both safe and empathetic, to encourage training, self-transformation, and autonomy. Finally, the support team is responsible for preparing food and maintaining the unit in hygienic and clean conditions (Law No. 23/2023 and Decree No. 450/2023).

There is broad agreement between studies, international guidelines, and legislation regarding the necessity of providing children receiving out-of-home care in a family as opposed to an institutional group home (Del Valle & Bravo, 2013), since the latter should be considered the last alternative (Dozier et al., 2014). Despite the recommendations of international and

national research (e.g., Anjos et al., 2023; Del Valle & Bravo, 2013) and the Law for Child Protection in Portugal, as opposed to many other countries, in Portugal there is a predominance of residential care to protect young people that are removed from their living context (Anjos et al., 2023; Calheiros et al., 2022; Magalhães et al., 2022). One possible explanation is that the number of children and adolescents who need alternative care greatly exceeds the number of foster families available in the Portuguese context (ISS, 2024).

CHAPTER II

RESEARCH PROBLEMS AND OBJECTIVES

Research Problems

Summing up the literature review presented in the previous chapter, research on youth mental health in residential care has mostly overlooked the role of protective factors and psychological health (Lou et al., 2018) while most studies have focused on risk factors and negative outcomes such as psychopathology (Hobbs et al., 2021; Pinheiro et al., 2021; Sulimani-Aidan & Melkman, 2024). A possible explanation for this might be that these groups frequently report high rates of past maltreatment, including neglect (physical, emotional, or lack of supervision) and emotional abuse (Collin-Vezina et al., 2011) which are commonly associated with internalizing (e.g., depression, anxiety) and externalizing symptoms (e.g., substance abuse, problems with peers) (Indias et al., 2019). This emphasis on risk and negative outcomes underscores the need for more balanced research that considers the psychological health potential of adolescents in residential care. Adolescents in residential care are often disadvantaged (Parry et al., 2023) because of their traumatic experiences before placement (Ames & Loebach, 2023); however, despite these circumstances, some adolescents in these specific developmental settings exhibit psychological health (e.g., competence; and life satisfaction; Maurović et al., 2014; Mishra & Sondhi, 2019) in the face of such adversity.

As described in the previous chapter, Grych and colleagues (2015) proposed a theoretical model to explain resilience after victimization. Therefore, according to the model (i.e., the Resilience Portfolio Model), adaptive trajectories after victimization can be explained by the dynamic role of a set of protective factors. Specifically, these protective factors directly or indirectly foster victims' behaviors: 1) influencing how individuals appraise and cope with adverse events (i.e., more resources promote more effective coping); 2) reducing their exposure to violence (i.e., more resources can decrease the likelihood of further adverse experiences), and 3) promoting positive adaptation (i.e., more protective factors positively affect individuals' functioning) (Grych et al., 2015). Nevertheless, as far as we know, no research has been conducted to determine the factors that, from a strengths-based theoretical and comprehensive framework (i.e., the Resilience Portfolio Model; Grych et al., 2015), are associated with these groups' resilience. Some studies have explored the protective factors of young people's psychological health who have experienced previous adverse events (e.g., violence, poverty, sexual abuse) (Afifi & MacMillan, 2011; Marriott et al., 2014; Ozer et al., 2017); however, these studies did not focus on young people in a specific developmental context (e.g., residential care) and did not consider idiosyncrasies related to the developmental trajectories of adolescents in the out-of-home care system. For instance, Yule and colleagues (2019) conducted a meta-

analysis of resilience in children exposed to violence and found a set of protective factors at different levels: individual (e.g., cognitive skills and positive self-perceptions), coping (e.g., problem-solving strategies), and contextual (e.g., family support, peer support, extra-curricular activities). This evidence suggests the importance of different developmental contexts (e.g., family and peers) and individual factors (e.g., cognitive skills and self-regulation) in fostering the psychological health of children exposed to violence (Yule et al., 2019). Nevertheless, this meta-analysis included studies comprising children from the general population but not in residential care. Lou and colleagues (2018) carried out a systematic review considering the residential care context and identified that individual (e.g., self-regulation) and contextual factors (e.g., quality relationships in residential care), together with previous experiences in the family (e.g., abuse and neglect), seem to be related to young people's adaptation (Lou et al., 2018). However, despite the relevance of this systematic review, the authors recognized that a significant cross-over appears to exist in the reviewed studies, between definitions (i.e., resilience as a personality trait *versus* as a dynamic process), correlates, and outcomes of resilience (Lou et al., 2018). Moreover, this systematic review suggests that research has primarily focused on the role of individual factors in mental health outcomes (Lou et al., 2018). Little is known about the associations between contextual resources and coping strategies in mental health outcomes (Lou et al., 2018) and consider mental health as a multi-dimensional concept (e.g., psychopathology and well-being; Magalhães & Calheiros, 2017).

In addition, there are no studies (e.g., systematic review, meta-analysis, qualitative, quantitative) that involve adolescents, professionals, or both (i.e., multi-informant approach) in residential care and include different research measures such as semi-structured interviews, questionnaires, or tasks (i.e., multi-method) taking into consideration the assumptions of the Resilience Portfolio Model (Grych et al., 2015). Therefore, it is important to conduct research (e.g., systematic review, meta-analysis, qualitative, and quantitative studies) based on these assumptions, which include variables at different levels (e.g., individual, contextual, and coping strategies) and dimensions of psychological health (i.e. psychopathology, well-being, and competence). Carrying out studies that allow the identification of protective factors for the psychological health of adolescents in residential care is crucial for designing the best interventions for young people in these settings.

Research Objectives

Guided by the Resilience Portfolio Model (Grych et al., 2015), in this dissertation, we aim to contribute to the discussion about resilience in residential care by updating previous literature (e.g., Lou et al., 2018), and to provide further innovative insights regarding the protective factors that foster the psychological health of adolescents in these settings. As described in the previous chapter, adolescents are the most prevalent age group in Portuguese non-specialized residential care settings (12-17 years; n = 3190, 49%; ISS, 2024). Therefore, in this dissertation, five studies focused specifically on these age groups.

First, a systematic review (Study 1; Chapter III) was conducted to map the literature on the protective factors associated with psychological health (i.e., psychopathology, well-being, and competence) and to identify the protective factors or resilience portfolio associated with adolescents' psychological health in residential care (Pinheiro et al., 2021). Second, a meta-analysis (Study 2; Chapter IV) was conducted to identify the protective factors that produced the largest effect sizes on adolescents' psychological health in residential care. Third, most studies in this field are quantitative (Pinheiro et al., 2021). For this reason, empirical evidence, particularly qualitative studies, adds a unique value in expanding knowledge and understanding adolescents' and care workers' perspectives on resilience conceptualization, as well as, identifying meaningful factors that influence adolescents' psychological health. In particular, hearing adolescents' voices and perspectives guarantees their right to participate in research related to their life in residential care (as the Convention on the Rights of the Child states in Article 12; United Nations General Assembly, 1989), which in turn might be associated with greater empowerment and well-being (Magalhães et al., 2022). Thus, this third study aimed to identify adolescents' perspectives on the concept of resilience and their perspectives on the protective factors for the psychological health of adolescents in residential care.

In addition, professionals in residential care are key to ensuring the adaptative functioning of adolescents in these settings (Pinheiro et al., 2022), and their perspectives influence their work (Calheiros et al., 2011). Therefore, it is crucial to listen to their perspectives and subjective experiences in the residential care context (Calheiros et al., 2011). As such, the fourth study aimed to identify care workers' perspectives on the concept of resilience and identify their perspectives regarding the protective factors for psychological health of adolescents in residential care.

Finally, combining two robust theoretical models that consider resilience as a dynamic process (i.e., the Resilience Portfolio Model; Grych et al., 2015), and mental health as a two-

dimensional construct (i.e., the Dual Factor Model of Mental Health; Antamarian et al., 2010), the last study (Study 5; Chapter VII) aimed to identify protective factors associated with different mental health group profiles of adolescents in residential care. This study provides innovative evidence for residential care providers who may be better equipped to create and carry out psychosocial interventions (i.e., decreasing symptoms and fostering well-being and competence) tailored to the specific needs of different profiles of adolescents in these specific settings.

In sum, the innovative nature of this dissertation relies on the need to bridge the gaps between empirical evidence (e.g., scarcity of studies focused on protective factors instead of studies focused on risk and psychopathology), building on different informants (i.e., adolescents and staff in residential care), mixed methods (e.g., systematic review, meta-analysis, qualitative and quantitative studies) and multi-method (e.g., semi-structured interviews, questionnaires, or tasks). We aim to inform researchers, professionals, and policy makers about the factors needed to promote adolescents' resilience in residential care settings as well as guiding and sensitizing the community, and society in general, about resilience in this population.

CHAPTER III

Adolescents' Resilience in Residential Care: A Systematic Review of Factors Related to Healthy Adaptation

The current study was published as

Pinheiro, M., Magalhães, E., & Baptista, J. (2021). Adolescents' resilience in residential care: A systematic review of factors related to healthy adaptation. *Child Indicators Research*, *15*(3), 819-837. http://dx.doi.org/10.1007/s12187-021-09883-4

Abstract

Research with young people in Residential Care (RC) has primarily focused on mental health problems, overlooking resilience and adaptation. Considering that previous trauma experiences and adversity (e.g., previous abuse and neglect) cannot be changed, it is critical to identify the current protective factors of adaptation in RC. Purpose: this systematic review aims to identify the protective factors or *the resilience portfolio* that may be positively associated with adolescents' healthy adaptation in RC. Method: based on the *PRISMA* statement and using a combination of keywords related with RC, adolescents, resilience, and adaptation a search in eight databases was conducted in November 2020: Academic Search Complete, APA PsycArticles, APA PsycINFO, Psychology and Behavioral Sciences Collection, ERIC, MEDLINE, Web of Science and Scopus. This search yielded 4442 articles, and 11 studies met our inclusion criteria. Results: Overall, the studies reported protective factors at different levels, namely, individual assets, resources from different contexts (family, RC, and community), appraisals and coping behavior. Conclusion: this review highlighted the importance of exploring resilience as a dynamic process of assets and resources rather than as a stable individual attribute. This review aims to contribute to a deep discussion about resilience in RC, informing policy-making and professional practices and enhancing young people's adaptation in RC.

Keywords

Residential Care, Resilience, Adaptation, Adolescents

Introduction

Children and young people in Residential Care (RC) present with greater mental health difficulties than children and young people in out-of-care contexts (Gearing et al., 2015; Jozefiak et al., 2016). These difficulties include emotional and behavioral problems (Alink et al., 2006; Bernedo et al., 2014; Campos et al., 2019; Camuñas et al., 2020; Finkelhor et al., 2009) that can endure into adulthood (Culhane & Taussig, 2009). Also, adolescents in RC are more likely to show symptoms of depression and anxiety, low confidence and independence, greater substance abuse, problems with peers and academic difficulties (Indias et al., 2019; Fowler et al., 2009; Mazza & Overstreet, 2000). Placement in RC adds extra vulnerabilities to children and young people's development (Delgado et al., 2019; Fernández-Artamendi et al., 2020; Lou et al., 2018; Magalhães & Calheiros, 2020; Pereira et al., 2010; Wright et al., 2015; Yu & Chan, 2019;). Admission to RC is an impactful event (Mota & Matos, 2015) because it involves the critical separation of children from their relatives, which highlights the key role of supportive relationships in RC (Calheiros & Patrício, 2014; Ferreira et al., 2020; Magalhães & Calheiros, 2017; Magalhães et al., 2021a). The combined effect of previous and current risk factors makes these young people particularly vulnerable to poor mental health outcomes (Gander et al., 2019; Indias et al., 2019; Magalhães et al., 2016; Magalhães et al., 2018). However, these problems are not always evident (Magalhães & Calheiros, 2017). The literature has primarily focused on the lack of adaptation and mental health problems (Jozefiak et al., 2016) overlooking resilient trajectories (Butler & Fran- cis, 2014; Lou et al., 2018; Sim et al., 2016). Considering that previous trauma and adversity (e.g., previous abuse and neglect; Jones et al., 2011) cannot be changed, it is crucial to identify the protective factors that explain adaptative or resilient trajectories of adolescents in RC. This is important as it may inform policy making and facilitate the identification of best practices that enhance young people's adaptation in RC.

Resilience and Healthy Adaptation

Research has demonstrated that some children, despite their adverse experiences, exhibit a healthy adaptation and positive development (Luthar et al., 2000; Masten, 2001). Several conceptualizations and theories of resilience have been proposed in the literature (Infante, 2005; Shean, 2015). Some authors define resilience as an individual attribute or personality trait (Goldstein & Brooks, 2005; Wagnild & Young, 1993), while others define this construct as a

dynamic process in which the inter- actions of contextual and individual factors influence each other to explain healthy adaptation after adversity (Kaplan, 1999; Luthar & Cushing, 1999; Masten, 1999).

Grych et al. (2015) proposed a theoretical model to explain resilience after expo- sure to violence – i.e., Resilience Portfolio Model. This model is based on different theoretical assumptions (e.g., positive psychology, post-traumatic growth, coping) and derives from research findings in this field. From a positive psychology perspective, understanding healthy functioning means identifying strengths that foster individuals' well-being or psychological health after their exposure to adversity (Grych et al., 2015). Empirical evidence on post-traumatic growth suggests that positive outcomes of functioning and positive changes may emerge after expo- sure to stressful life events (Tedeschi & Calhoun, 2004). Finally, coping research promotes the understanding of healthy adaptation after adversity as it details the behavioral, cognitive, and emotional processes following exposure to stressful life events (Lazarus & Folkman, 1984; Magalhães et al., 2021b).

Therefore, according to the Resilience Portfolio Model, healthy adaptation after exposure to violence can be explained by the dynamic role of a set of protective fac- tors (Grych et al., 2015). Specifically, these protective factors directly or indirectly foster the victims' behaviors: 1) influencing how individuals appraise and cope with adverse events (i.e., more resources encourage a more effective coping); 2) reducing their exposure to violence (i.e., more resources can decrease the likelihood of further adverse experiences); and 3) promoting healthy adaptation (i.e., more protective factors positively affect individuals' psychological health) (Grych et al., 2015). This model covers protective factors from different ecological levels (e.g., individual, microsystem, mesosystem, exosystem, macrosystem; Bronfenbrenner, 1977) and defines Assets as the individual's personal strengths (i.e., regulatory, interpersonal, and meaning making) that promote healthy functioning, and resources as sources of external protective factors (i.e., supportive relationships and environmental factors) (Grych et al., 2015).

Therefore, this evidence-based model highlights the importance of conceptualizing resilience as a dynamic process, through the integration of different frameworks and protective factors at different levels (e.g., individual and community) which can guide empirical and systematic review studies. In addition, this model allows us to explore the density and diversity of assets and resources (Grych et al., 2015), informing multisystemic intervention and prevention approaches with vulnerable groups, and particularly in RC.

Protective Factors of Health Adaptation in RC

Research has explored the protective factors of young people´s healthy adaptation who have experienced previous adverse events (e.g., sexual abuse, community violence, poverty, natural disasters, accidents) (Afifi & MacMillan, 2011; Marriott et al., 2014; Ozer et al., 2017). Yule et al. (2019) caried out a meta-analysis on the resilience of children exposed to violence. The authors found a set of protective factors at different levels: individual (e.g., positive self-perceptions, cognitive skills, coping, problem solving), family (e.g., family support, parent effectiveness), school (e.g., teacher support), peer (e.g., social support, satisfaction relationship) and com- munity level (e.g., community cohesion, extra-curricular activities, religion). This evidence suggests the importance of different contexts of development (i.e., family, school, peers) and of individual factors (i.e., self-regulation) to foster the healthy development of children exposed to violence (Yule et al., 2019). Specifically, in RC, a recent systematic review suggested that individual (e.g., internal stable and dynamic characteristics) and contextual (e.g., school, community polices) factors together with previous family experiences (e.g., abuse and neglect) are related with young people's resilience (Lou et al., 2018). However, the authors recognized that a significant cross-over appears to exist on reviewed studies, between definitions, correlates, and outcomes of resilience (Lou et al., 2018). As such, the current systematic review aims to contribute to this discussion about resilience in RC by updating the review of Lou et al. (2018). Also, this concern about cross-over will be addressed by adopting a specific and well-defined theoretical model to guide this review (i.e., the Resilience Portfolio Model; Grych et al., 2015). Indeed, to the best of our knowledge there are no systematic reviews guided by a robust theoretical model, aiming to systematize evidence focused on protective factors associated with adolescents' healthy adaptation in RC. Based on previous theoretical assumptions and empirical evidence (Grych et al., 2015), the following hypotheses are stated: (H1) greater individual (assets) and/or contextual (resources) resilience factors will be associated with enhanced adolescents' adaptation and psychological health in RC, and (H2) more effective coping appraisals and strategies will be associated with enhanced adolescents' adaptation and psychological health in RC.

In sum, the research problem was formulated based on the SPIDER strategy (Sample, Phenomena of Interest, Design, Evaluation and Research design (Cooke et al., 2012): a) Sample - Adolescents aged 10 to 19 years old in RC; b) Phenomena of Interest – protective or resilient factors associated to young people's health and adaptation outcomes in RC; c) Design -

Empirical longitudinal or cross-sectional studies; d) Evaluation – resilience outcomes include a range of indicators of psycho- logical health, namely, competence, adaptation, well-being or psychopathology; e) Research Design: quantitative, qualitative, and mixed methods.

Method

Literature Search Strategy

A systematic search was conducted in eight databases, namely Academic Search Complete, APA PsycArticles, APA PsycINFO, Psychology and Behavioral Sciences Collection, ERIC, MEDLINE, Web of Science and Scopus with the following restrictions: published until November 2020, with peer review and in English, Portuguese, or Spanish language. The studies were identified through the combination of the following words: (a) adolescen* OR youth; AND (b) residential care OR institution OR group home; AND (c) resilience OR resiliency OR resilient OR adaptation OR competence OR protect* factor. Additionally, a manually search was carried out in the references of the relevant papers on this topic.

Inclusion and Exclusion Criteria

The inclusion criteria for this review were as follows: (1) studies carried out with adolescents (aged between 10 and 19 years old) in RC; (2) studies framed in the resilience framework that considered the role of at least one protective factor for healthy adaptation; (3) studies that were qualitative, quantitative, or mixed methods; (4) published in English, Portuguese, or Spanish; (5) peer reviewed and (6) published until November 2020. On the other hand, studies were excluded if (1) they explored resilience as an individual trait or attribute, (2) were carried out in other out-of-home care contexts (e.g., foster care, juvenile justice), (3) were focused on the efficacy of intervention programs, (4) included children younger than ten years old, (5) were carried out with residential care alumni, and (6) were literature reviews or case studies.

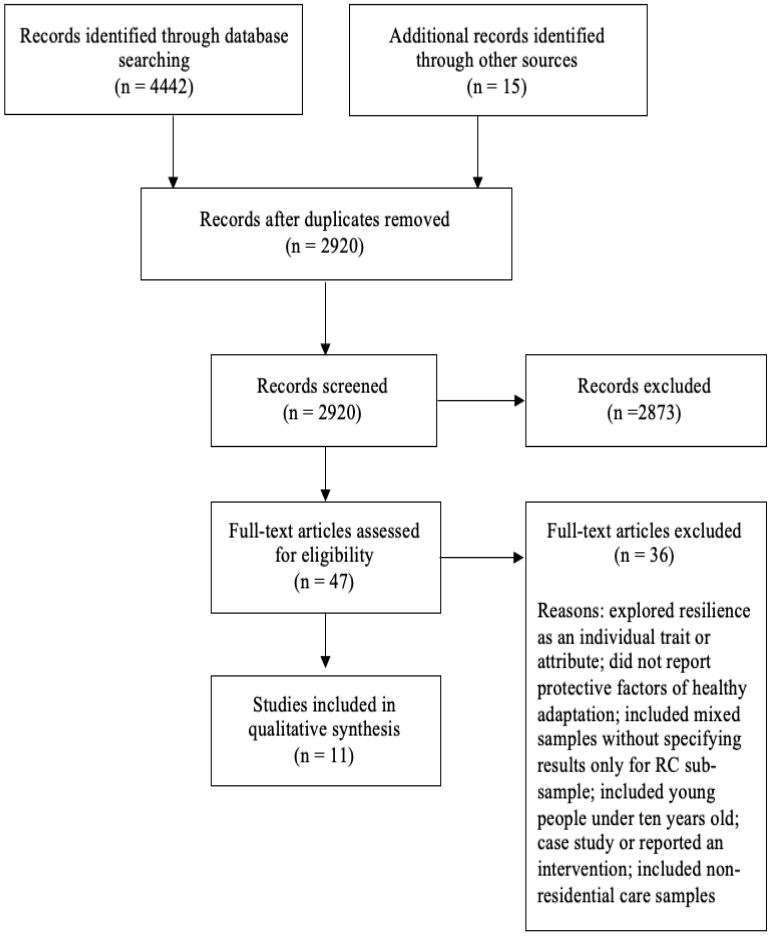
Study Selection and Data Extraction

As illustrated in Figure 2, the results of this review are based on PRISMA Statement – Preferred Reporting Items for Systematic Reviews (Liberati et al., 2009). The search identified 4442 articles. After removing duplicates, 2920 were identified. The *Rayyan* web app (Ouzzani et al., 2016) was used to conduct the screening of the title and abstract. One researcher screened all articles and 30% were also screened by an independent rater. An inter-judge's agreement of

98% was reached. The disagreements (2%) were resolved through a discussion with a third rater which resulted in 32 records for full-text screening. Manually searching and following-up references in other significant papers identified 15 other papers. After the full-text analyses of 47 articles, we excluded 36 articles that did not meet the inclusion criteria, specifically, we excluded studies that: (1) explored resilience as a personality trait/individual attribute, (2) did not report protective factors of healthy adaptation, (3) included mixed samples without specifying results only for RC sub-sample, (4) included young people under ten years old, (5) were a case study or reported an intervention and (6) included non-RC samples (e.g., in foster care or juvenile justice). Finally, this search identified 11 articles that describe protective factors of healthy adaptation of adolescents in RC and were selected for inclusion in the qualitative syntheses.

Figure 2

Results of the search strategy based on PRISMA (Liberati et al., 2009)



Results

Studies characteristics

As shown in Table 1, the selected studies were published between 1997 and 2017. Five studies were carried out in Europe (Barendregt et al., 2015; Bender & Losel, 1997; Cordovil et al., 2011; Maurovic et al., 2014; Segura et al., 2017), four in Asia (Aguilar-Vafaie et al., 2011; Aguilar-Vafaie et al., 2014; Mishra & Sondhi, 2019; Nourian et al., 2016), one in Africa (Malindi & Machenjedze, 2012), and one in the USA (Quisenberry & Foltz, 2013).

These studies included sample sizes ranging between 17 and 172 participants, aged between 11 and 19 years old, and most included both males and females (*n*=9), with two including only male samples (Barendregt et al., 2015; Malindi & Machenjedze, 2012). Most studies were quantitative (*n*=7; e.g., Aguilar-Vafaie et al., 2011; Barendregt et al., 2015; Bender & Losel, 1997), three were qualitative (Malindi & Machenjedze, 2012; Mishra & Sondhi, 2019; Nourian et al., 2016) and one used mixed-methods (Quisenberry & Foltz, 2013). Studies designs were mostly cross-sectional (*n* = 9), and only two longitudinal studies were included (Barendregt et al., 2015; Bender & Losel, 1997). Different methodologies including focus group, interviews and self-reported measures were applied in these studies to collect data.

Quantitative measures of healthy adaptation included mostly ASEBA - *Achenbach System of Empirically Based Assessment* - measures (i.e., Youth Self-Report, Child Behavior Checklist; Bender & Losel, 1997; Cordovil et al., 2011; Segura et al., 2017), the *Adapted version of The Adolescent Health and Development Questionnaire* (Aguilar-Vafaie et al., 2011; Aguilar-Vafaie et al., 2014) and the *Strengths and Difficulties Questionnaire* (SDQ) (Aguilar-Vafaie et al., 2011; Aguilar-Vafaie et al., 2014). Specific measures on well-being were also used (e.g., the *Lancashire Quality of Life Profile* and the *Self-Perception Profile for Adolescents*; Barendregt et al., 2015; The Subjective Happiness Scale; Maurovic et al., 2014; or the *Circle of Courage measure*; Quisenberry & Foltz, 2013).

Finally, most studies (*n* = 9) were based on a single informant - adolescents (e.g., Barendregt et al., 2015; Bender & Losel, 1997; Maurovic et al., 2014) or caregivers in RC (Cordovil et al., 2011). Only two studies were based on both adolescents and caregivers in RC (Aguilar-Vafaie et al., 2011; Aguilar-Vafaie et al., 2014).

Outcomes of healthy adaptation

Considering the components of a healthy adaptation or psychological health described in the *Resilience Portfolio Model* (Grych et al., 2015) (Table 2), the outcomes were organized in the

reviewed studies as the following: well-being, symptoms, or competencies. As such, most of the studies explored well-being outcomes (*n*=5; e.g., general well-being, happiness; Maurovic et al., 2014), followed by studies exploring symptoms (*n*=3; e.g., externalizing and internalizing problems; Cordovil et al., 2011), two studies explored both symptoms and competencies (e.g., externalizing, internalizing and pro-social behaviors; Aguilar-Vafaie et al., 2011; Aguilar-Vafaie et al., 2014), and only one study focused on competencies (e.g., above-average performance in different activities; Mishra & Sondhi, 2019).

Resilience portfolio for a healthy adaptation

To provide a clearer picture of the main findings from this review, information about protective factors was organized according to the three dimensions of the *Resilience Portfolio Model* (Grych et al., 2015): Assets, Resources, Appraisals and Coping behaviors (Table 2).

Assets

Assets included individual strengths that are positively associated with healthy adaptation in RC. Specifically, emotion regulation, cognitive skills, empathy and tolerance, social skills (Cordovil et al., 2011; Quisenberry & Foltz, 2013; Nourian et al., 2016; Maurovic et al., 2014; Segura et al., 2017), intolerance of deviant behavior (Aguilar-Vafaie et al., 2011), positive attitude towards school (Aguilar-Vafaie et al., 2011), and religious beliefs (Aguilar-Vafaie et al., 2011; 2014; Nourian et al., 2016).

Precisely, greater individual skills (e.g., social skills and empathy) were associated with more positive youth development (Quisenberry & Foltz, 2013). Social skills were also associated with higher levels of happiness (Maurovic et al., 2014), and lower internalizing and externalizing difficulties (Segura et al., 2017). Greater emotional regulation was associated with greater happiness (Maurovic et al., 2014), and greater emotion insight was related to lower internalizing and externalizing difficulties (Segura et al., 2017). Cognitive skills were associated with lower anxiety, and a greater number of resilient factors were also associated with lower psychopathology (Cordovil et al., 2011).

Furthermore, individual attitudes were also recognized as important factors to adolescents' adaptation. On one hand, greater attitudinal intolerance against deviance was associated with lower internalizing difficulties, and positive attitudes towards school were associated with lower externalizing (Aguilar-Vafaie et al., 2011). On the other hand, religious beliefs were

associated with lower levels of internalizing and externalizing symptoms (Aguilar-Vafaie et al., 2011; 2014), and with greater positive outcomes, such as indicators of positive growth (e.g., going through life's hardships; Nourian et al., 2016).

Resources

Resources included people from different contexts in the social ecology - family, RC, and community - who provide support and a positive environment to foster a healthy adaptation. Specifically, family resources included family connectedness and availability (Quisenberry & Foltz, 2013; Segura et al., 2017). Evidence suggested that lower internalizing and externalizing problems (Segura et al., 2017) and greater positive youth development (i.e., comprising belongingness, mastery, independence, and generosity; Quisenberry & Foltz, 2013) was reported by adolescents who felt more family connectedness and availability.

Looking at resources in the context of RC, caregivers' monitoring behaviors, control (Aguilar-Vafaie et al., 2011; 2014), and support (Aguilar-Vafaie et al., 2014; Mishra & Sondhi, 2019) were significant protective factors. Also, access to resources (Mishra & Sondhi, 2019), positive relationships with RC caregivers (Cordovil et al., 2011; Maurovic et al., 2014) and positive peer role models (Mishra & Sondhi, 2019) were also critical. Specifically, caregivers' behaviors of control and support significantly predicted lower conduct problems (Aguilar-Vafaie et al., 2014), caregivers' monitoring predicted lower internalizing symptoms (Aguilar-Vafaie et al., 2011), and supportive and monitoring behaviors positively predicted pro-social behaviors (Aguilar-Vafaie et al., 2014). Moreover, Mishra and Sondhi (2019) revealed that when the RC setting provides support (e.g., instrumental), access to educational resources or career guidance, adolescents are more able to deal with future challenges. Also, the authors identified that having positive role models from peers in RC was a factor associated with positive development and competencies. Finally, positive relationships with caregivers in RC were associated with greater happiness (Maurovic et al., 2014) and fewer symptoms (e.g., hyperactivity; Cordovil et al., 2011).

Considering community resources**,** the following protective factors were identified: positive relationships with teachers (Aguilar-Vafaie et al., 2011) and with peers (Cordovil et al., 2011; Bender & Losel, 1997; Maurovic et al., 2014; Mishra & Sondhi, 2019), school engagement, participation in extra-school activities (Malindi & Machenjedze, 2012), and social support at school or in the community (Bender & Losel, 1997; Malindi & Machenjedze, 2012; Nourian et al., 2016; Quisenberry & Foltz, 2013). Evidence from this review suggested that a

positive relationship with teachers was associated with pro-social behaviors for girls (Aguilar-Vafaie et al., 2011). Moreover, positive and supportive relationships with peers were associated with greater happiness (Maurovic et al., 2014), lower hyperactivity and depression (Cordovil et al., 2011), positive development (Mishra & Sondhi, 2019) and competence or personal growth (e.g., feeling peaceful and being able to deal with the problems; Nourian et al., 2016). Also, peer membership is recognized as an important factor associated with lower psychopathology (Bender & Losel, 1997). Satisfaction with peer support was associated with better outcomes on externalizing problems (Bender & Losel, 1997) and school engagement, and the involvement in extra-school activities were associated with greater pro-social behaviors (Malindi & Machenjedze, 2012). School engagement, social support at school and involvement in extra-school activities were also identified as protective factors for future orientation (Malindi & Machenjedze, 2012; Mishra & Sondhi, 2019), and more independence, generosity, and positive youth development (Quisenberry & Foltz, 2013).

Appraisals and Coping behavior

This section refers to adolescents' behaviors in RC that help in dealing with their difficulties and how these protective factors may promote well-being, and specifically, active coping and problem-solving strategies (Barendregt et al., 2015; Cordovil et al., 2011; Nourian et al., 2016). Findings suggested that more active coping strategies (e.g., confrontation and seeking social support) were associated with greater self-esteem (Barendregt et al., 2015) and greater problem-solving strategies were associated with lower depression (Cordovil et al., 2011) and greater well-being (Nourian et al., 2016). Finally, strategies involving positive inner dialogues seems to help adolescents in RC cope with problems and not lose their mental well-being (Nourian et al., 2016).

Discussion

This systematic review aimed to identify the protective factors, or the *resilience portfolio*, associated with adolescents' healthy adaptation in RC. Eleven studies reporting on protective factors according to three dimensions (i.e., individual assets, coping behavior, resources from different contexts, such as family, RC, and community) were included.

Supporting the first hypothesis, findings revealed that individual assets, such as cognitive and social skills or religious beliefs (Cordovil et al., 2011; Quisenberry & Foltz, 2013; Nourian et al., 2016) may have protective properties and were associated with greater adaptation,

namely, positive youth development, higher levels of happiness or lower psychopathology and behavioral difficulties. As such, having better cognitive skills predicted better resiliency outcomes given that it may be associated with adolescents' selection of adaptative coping strategies (Prussien et al., 2017), and social skills may enable young people to establish and maintain adaptive relationships (Schnittker, 2008) which may be further protective and associated with greater adaptation. Religiosity is also recognized in the literature as a protective factor for mental health (Cotton et al., 2006). Indeed, attributing meaning when faced with stressful experiences seems to enable individuals' beliefs or values through which they assign significance and purpose to their lives (Grych et al., 2015). The findings from this review indicated that positive inner dialogues seem to help adolescents in RC cope with their problems, preserving their mental well-being (Nourian et al., 2016). As such, coping also plays an important role in the general well-being of adolescents in RC (Gullone et al., 2000).

Supporting the second hypothesis, the current review suggested that more active coping strategies (i.e., focused on problems) were associated with greater self-esteem (Barendregt et al., 2015) and greater problem-solving strategies were associated with lower depression (Cordovil et al., 2011) and greater well-being (Nourian et al., 2016). This is in line with the current trends in coping research, according to which active and problem-solving strategies are theoretically related to better mental health and well-being (Arslan, 2016). As mentioned before, youth in RC are particularly vulnerable as they have experienced several stressors (Fernández-Artamendi et al., 2020; Magalhães & Calheiros, 2020); however, they are also able to adaptively cope with adverse experiences. Actively coping with adverse experiences might enhance young people's sense of competence and foster their self-esteem.

Regarding young people´s resources**,** this systematic review identified protective factors from different contexts, such as family, RC and community which foster a healthy adaptation of adolescents in RC. Specifically, the results suggested that adolescents who felt more connected with their family and felt that their family were available (Quisenberry & Foltz, 2013; Segura et al., 2017) reported lower internalizing and externalizing problems (Segura et al., 2017) and greater positive youth development (Quisenberry & Foltz, 2013). Arteaga and Del Valle (2003) found that the family can be an important resource in terms of emotional and functional support of young people in RC. Specifically, if youth feel that their family understands their needs and that there is someone particularly close and available, their adaptation and positive development seems to increase (Quisenberry & Foltz, 2013). Additionally, if youth perceive that they have great times with their family and that they do

things together, lower internalizing and externalizing problems are reported (Segura et al., 2017). Despite the relevance of family as a critical resource for resilient trajectories of adolescents in care, the role of the family was less explored in the reviewed studies (e.g., Mota & Matos, 2015; Quisenberry & Foltz, 2013). As such, not only are further studies needed to explore the specific role of the family, but it is also critical to include relatives in the intervention process during placement in RC as it may be an important resource for a resilient and adapted trajectory (Arteaga & Del Valle, 2003; Quisenberry & Foltz, 2013).

Beyond the family context, protective factors from other contexts of development are important (Grych et al., 2015; Masten, 2014), namely the significant relationships from school or community contexts (Wright & Masten, 2015). In the RC setting, we found that caregivers' monitoring behaviors, control (Aguilar-Vafaie et al., 2011; 2014) and support (Aguilar-Vafaie et al., 2014; Mishra & Sondhi, 2019) were significant protective factors, enhancing young people's outcomes of adaptation (Cordovil et al., 2011; Maurovic et al., 2014), namely, lower conduct problems (Aguilar-Vafaie et al., 2014), lower internalizing symptoms (Aguilar-Vafaie et al., 2011) and pro-social behaviors (Aguilar-Vafaie et al., 2014). These findings may be related with caregivers' practices of encouragement, support and warmth that might foster adolescents' adaptive behaviors and social competence (Aguilar-Vafaie et al., 2014; Mota & Matos, 2015).

In addition to caregivers in RC it is also critical to focus on the role of significant others in community contexts, such as teachers and peers (Aguilar-Vafaie et al., 2011; Maurovic et al., 2014; Mishra & Sondhi, 2019). Adolescence is a developmental period in which youth become more engaged with peers and spend more time with them (Arteaga & Del Valle, 2003). The peer group is a major context of development during adolescence as related to healthy functioning (Lam et al., 2014), given that peers provide a crucial opportunity for the development of emotional competencies and pro-social behaviors (Bukowski et al., 2011). As such, being part of a peer group may be particularly protective for young people exposed to stressful and adverse experiences or contexts (Grych et al., 2015).

Furthermore, the school context is particularly important for young people's development, and specifically, the protective role of teachers for their positive adaptation (Aguilar-Vafaie et al., 2011). According to Kruger and Prinsloo (2008), teachers play a significant role by structuring and planning a set of activities that may promote young people's resilience competencies (e.g., emotional, social, and cognitive), and provide support and meaningful

attachment (Ungar, 2006). Supportive relationships at school are an important psychosocial resource for youth's healthy development (Piko & Hamvai, 2010), which might be even more relevant to vulnerable adolescents in RC. The school environment should be organized to encourage the adolescent's full participation in educational activities, and such may foster positive relationships and adaptation (Goldstein & Brooks, 2005). In sum, these findings suggesting the critical role of contextual resources to adolescents' adaptation and psychological health added important insights about these non-individual resilience factors and supported the first hypothesis.

Limitations and future recommendations

Despite these relevant and meaningful findings, some limitations have been identified and recommendations for future research are highlighted. Most of the reviewed studies are cross-sectional, therefore longitudinal studies are needed that focus on the *resilience portfolio* of adolescents in RC, adopting a holistic, transactional, and ecological perspective (Grych et al., 2015; Wright et al., 2015). Furthermore, most studies included quantitative designs (e.g., Aguilar-Vafaie et al., 2014; Cordovil et al., 2011), as such, mixed methods approaches should be implemented in future research to obtain an in-depth understanding of these processes, meanings, or subjective experiences (Wright et al., 2015). Finally, most of the reviewed studies only explored psychological difficulties or well-being as the outcome, further studies are needed that simultaneously include positive and negative indicators of adaptation and health (Grych et al., 2015; Magalhães & Calheiros, 2017). In sum, the main contribution of this systematic review was to conceptualize resilience as a dynamic process anchored in a well-recognized theoretical model (i.e., Resilience Portfolio Model; Grych et al., 2015) and, for that reason, looking at how protective factors at different levels (e.g., assets, resources, and coping) may enhance resilient trajectories. This review aimed to go beyond the traditional approach which focuses on risk factors, difficulties, and deficits to identify the protective factors behind adaptation and resilience in RC.

Implications for practice in RC

Findings from this review highlight implications for practice in RC from an ecological perspective. The findings support the Ungar (2007) perspective that child welfare services should create conditions for positive youth development. Specifically, the role of RC caregivers (e.g., Aguilar-Vafaie et al., 2014; Mishra & Sondhi, 2019) and school (Aguilar-Vafaie et al.,

2011) is remarkable and requires particular attention. Thus, it is critical to ensure professionals are adequately trained to guarantee that they are supportive in their relationships with young people in care (Calheiros & Patricio, 2014; Ferreira et al., 2020; Magalhães & Calheiros, 2017; Magalhães et al., 2021). These warm and supportive relationships may foster the positive adaptation of adolescents in RC (Ahrens et al., 2011) increasing the possibility of developing new life paths (Drapeau et al., 2007). Professionals in care may provide guidance to young people, preparing them to deal with future life circumstances and challenges, fostering youth's confidence about their future (Mishra & Sondhi, 2019). Secondly, in line with an ecological perspective, psychological healthy outcomes of adolescents in RC can be fostered by significant others in different developmental contexts outside the residential facility (e.g., school). Moreover, the relationship between adolescents and their family is critical, bearing in mind the possible family reunification (Hébert et al., 2018; Munro, 2019). Thus, agents from different development contexts may provide and guarantee the best resources for young people's adaptation in care. Lastly, bearing in mind the positive role of active and problem-solving coping strategies (Arslan, 2017), intervention with adolescents in RC may be able to foster their adaptive coping efforts, by promoting skills and resources on problem-solving, support seeking and cognitive restructure of maladaptive coping beliefs (Magalhães et al., 2021).

In sum, this review highlights which protective factors should be considered for promoting positive adaptation of adolescents in RC, adopting an ecological perspective, and guided by a theoretical framework. Beyond exploring resilience as a stable individual characteristic or personality trait, this review provided evidence about how and when resilient outcomes may emerge.

Declarations

Conflict of Interest The authors declare that they have no conflict of interest

Table 1

Summary of studies with the protective factors of adaptative outcomes in adolescents in RC

Authors	Year	Country	Sample (size, type)	Gender and Age (Mean, Range)	Study design	Instruments	Informants	Protective Factors	Psychological Health
Aguilar-Vafaie, Roshani, Hassanabadi, Masoudian & Afruz	2011	Iran	N = 140	Male = 50.7% *M* = 15.4 (11-18)	Cross-sectional, quantitative	Adolescent Health and Development Questionnaire (adapted version) Religious Orientation Scale (adolescents) Strengths and Difficulties Questionnaire (caregivers)	Adolescents RC Caregivers	Assets and Resources	Internalizing problems Externalizing problems Pro-social behaviors
Aguilar-Vafaie, Roshani & Hassanabadi	2014	Iran	N = 140	Male = 50.7% *M* = 15.4 (11-18)	Cross-sectional, quantitative	Adolescent Health and Development Questionnaire (adapted version) Religious Orientation Scale (adolescents) Strengths and Difficulties Questionnaire (caregivers)	Adolescents RC Caregivers	Assets and Resources	Conduct problems Pro-social behaviors

Barendregt, Van der Lann, Bongers & Nieuwenhuizen	2015	Netherlands	N = 172	Male = 100% *M* = 16.1 (16-18)	Longitudinal, quantitative	Lancashire Quality of Life Profile (Dutch youth version) Global Self-Worth Scale Utrecht Coping List	Adolescents	Coping behaviors	General well-being
Bender & Losel	1997	Germany	N = 100	Male = 66% *M* = 16.55	Longitudinal, quantitative	Youth Self-Report Peer Relations and Social Support questions (interview and structured paper pencil instrument developed by the research group)	Adolescents	Resources	Problem behaviors
Cordovil, Crujo, Vilariça & Caldeira da Silva	2011	Portugal	N = 64	Male = 53.1% *M* = 14.86	Cross-sectional, quantitative	Three checklists for the characterization of adolescents, institution and community developed by the research group based on the checklist by Ann S. Masten. The Child Behavior Check List	RC Caregivers	Assets, Resources and Coping behaviors	Total problems

Malindi & Machenjedze	2012	South Africa	N = 17	Male = 100% *M* = 15.5 (11-17)	Qualitative	Three semi-structured focus group interviews	Adolescents	Resources	Pro-social behaviors Future orientation
Maurović, Križanić & Klasić	2014	Croatia	N = 118	Male = 74% *M* = 16.47 (14-18)	Cross-sectional, quantitative	The List of Major Life Events/Stressors The Everyday Stress among Adolescents in RC The Protective Mechanisms among Adolescents in RC The Subjective Happiness Scale	Adolescents	Assets and Resources	Happiness
Mishra & Sondhi	2019	India	N = 20	Female = 60% *M* = 15.6 (13-19)	Qualitative	Focus groups	Adolescents	Resources	Positive outcomes (e.g., competence)
Quisenberry & Foltz	2013	USA	N = 42	Male = 64.3% *M* = 16 (13-18)	Cross-sectional, mixed-methods	Interviews Adverse Childhood Experiences Adolescent Resiliency Questionnaire Circle of Courage Questionnaire	Adolescents	Assets and Resources	Positive youth development (i.e., Belongingness, Mastery, Independence and Generosity)

Segura, Pereda, Guilera & Hamby	2017	Spain	N = 127	Female = 53% *M* = 14.60 (12-17)	Cross-sectional, quantitative	Socio-demographic Questionnaire Juvenile Victimization Questionnaire Youth Self-Report Adolescent Resilience Questionnaire	Adolescents	Assets and Resources	Internalizing problems Externalizing problems
Nourian, Shahbolaghi, Tabrizi, Rassouli & Biglarrian	2016	Iran	N = 8	Male = 62.5% *M*= 14.87 (13-17)	Qualitative	Socio-demographic Questionnaire The Resilience Scale Interviews	Adolescents	Assets, Resources and Coping behaviors	Post-traumatic growth (e.g., going through life's hardships).

Table 2

Adolescents' resilience portfolio in RC

Assets	***Coping***	**Psychological Health**
Cognitive and Social skills Empathy Intolerance of deviant behavior Positive attitude towards school Religious beliefs	Active *coping* and problem-solving strategies	Well-being (e.g., general well-being, happiness, positive youth development, self-esteem, post-traumatic growth) Symptoms (e.g., internalizing, externalizing, total problems, conduct problems, problem behaviors) Competencies (e.g., pro-social behaviors, future orientation).
Resources		
Family Residential Care Community		

CHAPTER IV

Resilience of adolescents in residential care: a meta-analysis about factors associated with psychological health

This study is currently under review

Pinheiro, M., Magalhães, E., Baptista. J., & Camilo, C. (under review). Resilience of adolescents in residential care: A meta-analysis about factors associated with psychological health. *American Journal of Orthopsychiatry.*

Abstract

Young people living in residential care may have experienced traumatic events which are commonly associated with high levels of psychological difficulties. Nonetheless, some youths demonstrate resilient outcomes in the face of such adversity. This meta-analysis aimed to identify the protective factors that produce the largest effect sizes in resilience outcomes of adolescents in residential care. Eight databases (e.g., Academic Search Complete, APA PsycArticles) in January 2022 were used to identify studies for the review and 29 articles met the inclusion criteria. The factors with the most significant impact on resilience outcomes were the individual's self-regulatory capacities and the support received from staff, family, and peers. Moderation analyses revealed significant results on youth psychopathology, in terms of age, geographical region, and type of informant. This meta-analysis contributes to the existing evidence on the best practices for adolescents' positive adaptation following maltreatment and trauma, by identifying specific paths to target prevention or intervention in the childcare system.

Keywords

Adolescents, Residential care, Resilience, Adaptation

Public Policy Relevance statement

Adolescents in residential care may exhibit resilient outcomes despite experiencing adversity. This meta-analysis identified the protective factors that had the largest effects on the resilience of this group. Protective factors, such as individual regulatory capacities, staff in residential care, family, and peers, produced the largest effect sizes regarding adolescents' psychopathology, well-being, and competence. Policymakers and practice professionals should integrate these factors into their intervention efforts.

Introduction

Resilience involves the ability to adapt and to show healthy functioning after exposure to adversity (Luthar & Cushing, 1999; Masten, 1999). Grych and colleagues (2015) proposed a developmental and lifespan model of resilience - *the Resilience Portfolio Model* - considering the continuities and discontinuities in protective processes across the lifecycle. *The Resilience Portfolio Model* is based on the integration of different theoretical assumptions (e.g., positive psychology, post-traumatic growth, and coping) to explain resilience after violence. According to this model, a healthy psychological adaptation can be explained through the dynamic role of protective factors that foster victims' behaviors directly or indirectly (e.g., influencing how individuals cope with adverse events, reducing exposure to violence, and promoting healthy adaptation). These protective factors are described as assets (e.g., regulatory strengths, interpersonal strengths, and meaning-making strengths) and resources (e.g., supportive relationships and contextual factors), and are organized at different ecological levels. According to the authors, healthy adaptation or psychological health is a multidimensional concept involving greater well-being, affect, competencies, and lower symptoms (Grych et al., 2015). This is consistent with the assumption that the mere absence of psychological difficulties is not a sufficient condition to achieve positive or complete mental health (Suldo et al., 2011). Furthermore, this is consistent with the assumption that resilience heavily depends on systematic and contextual factors, not an individual change process or capacity to overcome previous adversity (Bonnano et al., 2015; Ungar & Theron, 2019; Ungar et al., 2023).

Following this conceptual model, a recent meta-analysis of resilience in children exposed to violence (e.g., maltreatment, intimate partner violence, and community violence) identified protective factors at different ecological levels: individual level (positive self-perceptions, cognitive skills, self-regulation, and coping); family level (perceived support from relatives); school and peer level (felt supported and valued by teachers and staff and the sense of security in school and satisfaction with peers relationships); and community level (extracurricular activities and religious involvement) (Yule et al., 2019). The findings from this meta-analysis suggested that four protective factors – self-regulation, family support, school support, and peer support - are particularly significant for adaptative functioning, and significant *additive* and/or *buffering* effects in cross-sectional and longitudinal studies are identified (Yule et al., 2019). *Additive* effects mean that the protective factor may be associated with greater functioning in all individuals, regardless of stressful events while the *buffering* effect means that the protective factor has an effect only for children who have experienced adversity, *lessening* the impact of

a stressful event on one's adaptation (Yule et al., 2019). Specifically, the authors identified significant *additive* effects for self-regulation, positive self-perceptions, and coping skills in cross-sectional studies. Further, *buffering* effects analyses showed that coping skills and positive self-perceptions buffered the negative impact of stress. Family support showed *additive* and *buffering* effects, school and peers' support showed *additive* effects, and only peers support showed a *buffering* effect (Yule et al., 2019). As such, greater self-regulation skills, positive self-perceptions, adaptive coping skills and support from different sources (family, peers and school) are positively associated with better psychological health of adolescents, regardless of the levels of violence they experienced (i.e., additive effects). However, when young people experienced high levels of violence or stress, their positive self-perceptions, coping and family or peers support lessened the negative effect of violence, as these adolescents revealed better psychological health than those who revealed lower positive self-perceptions, coping and family or peers' support. Despite these findings, Yule et al. (2019) did not focus on young people[1] in residential care.

Young people in residential care face greater risk and vulnerability than youth living in birth families (Gearing et al., 2015; Jozefiak et al., 2016) or in foster family care contexts (Leloux-Opmeer et al., 2016). Regardless of the cultural context, it is well recognized that young people in residential care are at increased risk of mental health difficulties (Petrowski et al., 2017) when compared with youths in other contexts, particularly those living with their birth families (Magalhães & Calheiros, 2017) or placed in foster family care (Leloux-Opmeer et al., 2016). In fact, studies have consistently reported that young people in residential care tend to show significant short- and long-term negative emotional (e.g., depression and anxiety) and behavioral outcomes (e.g., aggressive behaviors and peer problems) (Gearing et al., 2015; Indias et al., 2019; Magalhães & Calheiros, 2017; Simsek et al., 2007). These difficulties are mainly caused by early trauma and adversity, such as domestic violence (Holt et al., 2008), parental neglect, physical, emotional (Calcing & Benetti, 2014), and/or sexual abuse (Doerfler et al., 2009) or war, refugee experiences and economic hardship (Cantwell et al., 2012). Moreover, considering that residential care is the seen as the "last resort" in the childcare system, this means that young people entering residential care settings are the group most at risk (Parry et al., 2023). Moreover, their current experiences in residential care and out-of-home placement changes add developmental challenges (Jansen, 2010). For instance, living in

[1] The term "young people" refers to children and adolescents.

residential care involves dealing with a set of challenges that substantially differ from those living in the family context, namely organizational factors such as high ratios of young people to professionals, staff turnover, and professionals' administrative burden (Pinheiro et al., 2022). Additionally, the social organizational climate of a residential setting includes the organization's structure, which defines a system of norms and expectations that are shared within the group (Mazzone et al., 2018; Silva et al., 2021). These challenges are recognized as barriers to building and maintaining quality relationships between the residential staff and each child (Pinheiro et al., 2022), which may impact directly or indirectly young people's development.

Despite such evidence focused on adversity and trauma experiences, existing research shows that some youths in residential care exhibit adaptative and positive outcomes (Lou et al., 2018; Pinheiro et al., 2021). A recent systematic review based on *the Resilience Portfolio Model,* including only adolescents in residential care, identified protective factors for psychological health at the individual (e.g., cognitive, social skills, and religious beliefs) and environmental levels (e.g., family, residential care, and community factors) levels (Pinheiro et al., 2021). Individual assets such as cognitive and social skills, empathy, positive attitude toward school, or religious beliefs seem to be positively associated with adolescents' healthy adaptation (i.e., well-being, competence, and low levels of psychopathological symptoms) in residential care. From a trauma and developmental-based perspective, children and young people in care present different needs and profiles that must be carefully considered by residential care settings from an ecological approach to prevent pathologizing the children who were not able to achieve a resilient trajectory. Rather than that, different resources should be mobilized for the diversity of needs and strengths of children and young people in residential care (Pinheiro et al., 2021).

As such, resources from different contexts in social ecology (e.g., family, residential care, and community) were identified as protective, by providing social support (i.e., emotional, instrumental, and financial) to adolescents in residential care. Despite this important evidence, the systematic review by Pinheiro and colleagues (2021) lacked in providing information about the magnitude of different factors influencing young people's healthy adaptation, as well as possible moderating variables. Specifically, the work by Pinheiro and colleagues (2021) aimed to map the factors positively associated with healthy adaptations of young people in residential care, including qualitative, quantitative, and mixed-methods research. In this meta-analysis, we aim to go further and provide new insights by quantitatively synthesizing the contribution (effect size) of each protective factor to specific psychological outcomes (psychopathology,

well-being, and competence) of youth in residential care to enhance the efficacy of intervention programs targeting this population.

Furthermore, empirical evidence has shown differences between children and adolescents (e.g., older children show more psychosocial and academic difficulties than younger children; Attar-Schwartz, 2008), different types of out-of-home care placements (e.g., residential care *versus* other out-of-home placements), and between different geographical regions given the variability in terms of legal frameworks and cultural dynamics (e.g., Europe, North America, or others; Del Valle, 2013; Connolly & Katz, 2019). Although the risk of child abuse and the needs of young people are widely acknowledged, the ways in which these risks and needs are met in childcare systems vary considerably between countries (Hetherington, 2002). Finally, the literature has shown little convergence between different informants regarding child maltreatment reporting (Cooley & Jackson, 2022), and reports of mental health functioning-internalizing/externalizing behavior problems (Petrenko et al., 2012). As such, the differences between the type of informants (i.e., adolescents and/or adults who participated in the studies) seem to be relevant for the analyses.

Research Problems and Objectives

The identification of factors associated with adolescents' resilience in residential care has been overlooked (Pinheiro et al., 2021). This meta-analysis aimed to address this gap, proposing to: 1) go beyond the traditional perspective focused merely on the absence of difficulties, by including a multidimensional approach to psychological health (i.e., psychopathology, well-being, and competence); 2) go beyond the conceptualization of resilience as an individual characteristic or trait, by using an ecological, holistic, dynamic, and transactional approach (i.e., *Resilience Portfolio Model*; Grych et al., 2015); and 3) provide evidence about individual and contextual factors with the most significant (main and moderating) effects on young people's resilience in residential care. Although previous systematic reviews were conducted with young people in residential care (Lou et al., 2018; Pinheiro et al., 2021), to the best of our knowledge, no meta-analyses have been conducted. Also, by including a multidimensional approach to psychological health we aim to provide evidence that might allow a more effective design for intervention efforts, by targeting the intervention to the factors with greater effects, specifically regarding different outcomes.

Method

Literature Search Strategy

An electronic search was conducted using eight databases: Academic Search Complete, APA PsycArticles, APA PsycINFO, Psychological and Behavioral Sciences Collection, ERIC, MEDLINE, Web of Science, and Scopus, restricting the search to articles published until January 2022, peer-reviewed, and written in English, Portuguese, or Spanish. The studies were identified through the combination of the following keywords: (a) "residential care" OR "out-of-home care" OR "group home"; AND (b) "psychological health" OR resilien* OR competenc* OR "positive functioning" OR well-being OR "psychological difficult*" OR symptom* OR psychopathol*; AND (c) support OR "positive self-perception*" OR "self-regulation" OR coping OR "community cohesion" OR "extra-curricular activities" OR religi* OR "protect* factor*". Additionally, a manual search was performed based on the references of relevant articles and previous reviews of the literature on the topic (e.g., Attar-Schwartz & Fridman-Teutsch., 2018; Magalhães & Calheiros, 2020).

Study Selection and Data Extraction

The inclusion criteria for the primary studies were as follows: (a) studies that reported on the associations between protective factors (e.g., staff support, social support, support relationships) and outcomes of adaptation (e.g., psychopathology, well-being, competence) or resilience; (b) studies carried out with adolescents living in generalist residential care (10-19 years old; adolescence period according to the World Health Organization, WHO) or mixed samples with specific results for the residential care sub-sample; (c) quantitative or mixed methods studies; (d) studies with longitudinal or cross-sectional designs; (e) published in peer-reviewed journals until January 2022; and (f) written in English, Portuguese, or Spanish. The exclusion criteria were as follows: (a) studies of adults that collected retrospective reports of protective factors during their experience while in care; (b) studies carried out in other out-of-home care contexts (e.g., therapeutic care, foster care, juvenile correction settings) rather than generalist residential care; (c) qualitative studies; (d) literature reviews or case studies; and (e) studies that included only children younger than ten years old or youth older than 19 years.

As illustrated in Figure 3, the study selection procedure was based on the *PRISMA Statement – Preferred Reporting Items for Systematic Reviews* (Page et al., 2021) and relied on a three-step process (i.e., identification, screening, and inclusion). The search identified 4097 articles, and after removing duplicates, 2529 were screened based on the title and abstract using the Rayyan

web app (Ouzzani et al., 2016). One researcher screened all the articles, and 30% were screened by an independent rater. An inter-rater agreement of 97% was achieved. Disagreements (3%) were resolved through discussion with a third rater, resulting in 80 studies for full-text reading. A manual search and following-up references in other significant articles identified more 12 articles. After the full-text analyses of 92 articles, 54 were excluded because they did not meet the inclusion criteria, and specifically, (a) included non-residential care samples, (b) did not report the associations between protective factors and outcomes of adaptation; (c) included only children younger than ten years old; (d) did not include psychological health outcomes; (e) included only residential care alumni; (f) carried out in other out-of-home care contexts (e.g., juvenile justice); (g) included young adults older than 19 years old. Another 9 studies were excluded during data extraction because they did not provide the required statistical information to conduct the analyses (despite contacts directed to the authors). Finally, 29 articles were selected for inclusion in the quantitative syntheses.

Coding of the studies

Based on the guidelines proposed by Lipsey and Wilson (2001), we created a form for coding the main studies' characteristics, results, and the specific data required to calculate effect sizes. Specifically, the following information was extracted: bibliographical information (authors; title; year of publication), sample characteristics (type of informants – adolescents, caregivers, or teachers; type of sample – residential care or combined; age range of the children; sample size), study characteristics (geographical region in which the study was conducted; design), information about the variables (type of protective factor; type of psychological health outcome), and the respective effect sizes.

The protective factors and psychological health outcomes were categorized according to the *Resilience Portfolio Model* (Grych et al., 2015). As a result, protective factors at the assets and resources levels were identified: regulatory strengths (e.g., positive self-perceptions, self-control, self-esteem, optimism), interpersonal strengths (e.g., interpersonal skills), meaning-making strengths (e.g., spirituality and hopeful thinking), coping strategies (e.g., problem-solving skills, concentrating on resolving the problem), family support (e.g., contacts, trust, and communication with mother and/or father), residential care (e.g., staff support and residential strengths – place attachment, residential care climate), school and peers (e.g., teacher and peers support) and community (e.g., extracurricular activities and general social support). Psychological health outcomes were coded into symptoms of psychopathology (e.g.,

internalizing, externalizing, and total problems), subjective well-being (e.g., life satisfaction, quality of life), or life skills and a subjective sense of competence (e.g., life skills and readiness to leave residential care).

Based on this evidence, potential moderating variables were examined, specifically age (mean), sample (residential care or mixed – e.g., studies that include both residential care and other residential contexts such as foster care, therapeutic residential care, and youth villages), geographical regions (Europe, North America, or others), and type of informants (adolescents or others).

Calculation of effect sizes and analyses plan

Most studies in this meta-analysis reported Pearson's correlation coefficient (*r*) to quantify the association between protective factors and psychological health outcomes. Other statistics (e.g., *t*-test, *F*-test, Cohen's *d*) presented in the primary studies were converted into *r* values using the methods and formulas proposed by Lipsey and Wilson (2001), and by Borenstein et al. (2009). The effect size from each study was coded with positive values, indicating that the factors were associated with higher levels of health adaptation, whereas negative values predicted lower levels of healthy adaptation. As the correlation coefficients are not normally distributed, possibly negatively affecting the results of the analysis' (e.g., Cooper, 2010; Lipsey & Wilson, 2001), *r* values were transformed into normally distributed Fisher's z-values prior to conducting the statistical analyses.

After the analyses, Fisher's *z*-scores were transformed back into correlations to enhance the interpretation of the results. In the present study, effect sizes ranging from $r = .100$ to $r = .242$ were interpreted as small, from $r = .243$ to $r = .370$ as moderate, and from $r = .371$ as large (Rice & Harris, 2005). As most studies presented more than one effect size per factor (e.g., staff support and place attachment were categorized into the same protective factor, that is, factors related to support in residential care settings), a multilevel meta-analysis was performed for each factor associated with each psychological health outcome (psychopathology, well-being, and competence). Through these three-level meta-analyses, three different sources of variance were modeled: variance between studies (level 3), variance between effect sizes from the same primary study (level 2), and sample variance of the retrieved effect sizes (level 1) (e.g., Assink et al., 2015; Mulder et al., 2018). The multilevel models allow the calculation of the overall effect size and, if significant variance on level 2 and/or level 3 is observed, to examine whether study and/or sample characteristics can explain this variance. Meta-analytic models were built

in the statistical environment R (version 3.6.3, R Core Team, 2020), with the function "rma.mv" of the metafor package (Viechtbauer, 2010), using the syntax described by Assink and Wibbelink (2016). The model coefficients were tested two-sided using the Knapp-Hartung-correction (Knapp & Hartung, 2003), meaning that a t-distribution was used for testing individual coefficients, and an F-distribution was used for the omnibus-test of all coefficients in the model (excluding the intercept). The sampling variance of the observed effect sizes (Level 1) was estimated using the formula proposed by Cheung (2014). To determine the significance of the variances at levels 2 and 3, two one-sided log-likelihood-ratio tests were performed, in which the deviance of the full model was compared with the deviance of the model without one of the two variance-parameters. To conduct the moderator analyses, dummy variables were created for each category of discrete variables. Continuous variables were centered around their mean, and the full dataset for each psychological health outcome was used instead of testing the potential moderators for each factor. Finally, a nonparametric and funnel-plot based trim-and-fill analysis was conducted to check for potential biases (such as publication bias) (e.g., Duval, 2005).

Results

Characteristics of the included studies

A total of 29 articles and 261 effect sizes were included. The selected studies were published between 2007 and 2021. Most studies were conducted in Europe (n=13; e.g., Erol et al., 2010; Llosada-Gistau et al., 2017; Magalhães & Calheiros, 2017), followed by Asia (n=10; e.g., Assouline & Attar-Schwartz, 2020; Attar-Schwartz & Huri, 2019), Africa (n=2; Caserta et al., 2016; Yendork & Somhlaba, 2014), North America (n=2; Makanui et al., 2019; Tessier et al., 2018), and South America (n=2; Ortúzar et al., 2021; Orúzar et al., 2019).

These studies included sample sizes ranging from 60 to 4420 participants, aged between 6 and 25 years old, and most included both males and females (n=27), with one including only males (Sierau et al., 2019) and one including only females (Duta, 2018). All studies were quantitative. Study designs were mostly cross-sectional (n=28), and only one longitudinal study was included (Tessier et al., 2018). Finally, most studies (n=28) were based on a single informant type (i.e., adolescents). Only one study was based on multiple informants: adolescents, caregivers in residential care, and teachers (Erol et al., 2010). Most studies (n=19) were carried out in a residential care context (e.g., Assouline & Attar-Schwartz, 2020; Magalhães & Calheiros, 2017) and ten mixed studies combined the typology of out-of-homes

placements and other contexts (e.g., residential care, therapeutic residential care, kinship care, foster care, youth villages street, community) (e.g., Caserta et al., 2016; Llosada-Gistau et al., 2017).

Overall effects of the protective factors on psychopathology

The overall effect of each factor on psychopathology is described in Table 3. Specifically, significant but small effects were found for family (r = -.162, p <.001), peers (r = -.187, p =.002), and staff in residential care level (r = -.155, p <.001). This means that the more support from family, peers, and staff was associated with lower the levels of psychopathology.

Overall effects of the protective factors on well-being

Regarding well-being, the overall effect of each factor is described in Table 4. Significant effects were found for regulatory strengths with a large magnitude (r = .383, p =.034), and staff support in residential care with a moderate magnitude (r = .284, p <.001). This means that more regulatory strengths (e.g., positive self-perceptions and self-control) and more support from staff in residential care are associated with higher levels of adolescents' well-being.

Overall effects of the protective factors on competence

In terms of competence, the overall effect of each factor is described in Table 5. Specifically, significant and small to moderate effects were found for regulatory strengths (r = .365, p =.005) and staff support in residential care (r = .242, p =.027), meaning that the more regulatory strengths and support from the staff, the greater the competence of the adolescents.

Moderation analyses

Considering all the factors in one dataset for each psychological health outcome (see Methods section), the log-likelihood ratio tests revealed significant variance on both level 2 and level 3 of the multilevel meta-analytic models. Therefore, we proceeded by testing variables as potential moderators for each psychological health outcome (i.e., psychopathology, well-being, and competence; Tables 6, 7, and 8). Moderation analyses revealed significant results only for psychopathology, namely in adolescents' age, $F(1, 98) = 5.294$, $p = .024$, region of data collection, $F(2, 118) = 6.923$, $p = .001$, and type of informants, $F(1, 199) = 7.812$, $p = .006$. Regarding age, the younger the adolescents, the smaller the effect of the protective factors on psychopathology. Concerning the geographical regions of data collection, the effect of

protective factors on psychopathology was larger in studies conducted in North America (r = -.289) and Europe (r = -.181) and smaller in other geographical regions (r = -.032). Finally, the moderation effect of the type of informant on psychopathology showed that in studies using adolescents' reports, the effect of protective factors on psychopathology was larger (r = -.165) than those relying on reports of other informants (r = -.057).

Trim and fill analysis

The trim and fill analyses suggested that bias was present in most of the factors associated with psychological health outcomes, given the asymmetrical funnel plot distributions observed. After the trim and fill analyses, the overall effects were adjusted by imputing "missing" effect sizes and re-estimating an overall effect, presented in Tables 9, 10, and 11. For psychopathology, higher effects were observed for meaning-making strengths, family support, and peer support, whereas coping, regulatory strengths, staff support, and general support had smaller effects. For well-being, higher effects were found for meaning-making strengths and staff support, and a smaller effect was found for coping strategies. For competence, higher effects were found for staff support and general support.

Discussion

Guided by the *Resilience Portfolio Model* (Grych et al., 2015), this meta-analysis aimed to identify a) the factors with the largest effects on resilient outcomes of adolescents in residential care, going beyond the traditional approach focused merely on the absence of difficulties and b) the moderating role of some variables (i.e., age, sample, geographical regions, and type of informant) in the associations between protective factors and psychological health outcomes. To the best of our knowledge, this is the first meta-analysis that included adolescents in residential care, and which was focused on the associations between protective factors and resilience outcomes. The resilience of adolescents in residential care may be expressed by how these individuals adapt positively and show healthy functioning (e.g., greater psychological health, lower symptoms and higher well-being) after adversity (e.g., abuse and neglect). Our study supports the value of the protective factors such as self-regulation, coping, and family support as described by Pinheiro and colleagues (2021) and expands past evidence by providing new insights into the specific contribution of each protective factor to the psychological health outcomes of adolescents in residential care. Additionally, by framing this meta-analytic review through a multidimensional approach to psychological health, our work adds to previous

scholarship targeting interventions at multiple domains to promote psychological health (i.e., psychopathology, well-being, competence).

Specifically, our findings revealed 1) the prevailing contribution of support provided by staff in residential care in all psychological health outcomes (i.e., psychopathology, well-being, and competence), 2) the protective role of family and peer support to psychopathology, and 3) the role of adolescents' individual regulatory strengths to well-being and competence outcomes. Thus, the included studies suggested that the more support from staff in residential care, family, and peers, the lower the levels of psychopathology (i.e., internalizing symptoms, externalizing symptoms, and total problems). In addition, the more support from staff in residential care and the more adolescents' individual regulatory strengths, the greater their well-being and competence.

This finding offers important clinical implications for professionals who work with adolescents in residential care. Staff in residential care have a pivotal role as primary caregivers due to their involvement in young people's daily routines, which in turn may significantly impact their psychological outcomes (Pinheiro et al., 2022). Secure attachments with caregivers are associated with more youth's adaptative functioning (Blaustein & Kinniburgh, 2017), and thus, the relationship between youth and staff is an important therapeutic resource for youth's recovery in residential care (Sulimani-Aidan & Tayri- Schwartz, 2021). To achieve this therapeutic role, and to fostering the adolescents' self-capacities, secure relationships are needed, and highly skilled staff is required. Caregivers in residential care should be able to provide guidance, advice, and companionship to youths (Caserta et al., 2016), supporting them in dealing with stressful situations or life events (Cohen & Wills, 1985). Specifically, training professionals in residential care is critical, particularly fostering their skills to care for young people with complex mental health needs. Trauma-informed approaches might be particularly useful in this context as they provide a safe environment for young people who suffer early trauma, based on quality relationships with caregivers, which might be achieved through the improvement of staff awareness, understanding, and implementation of evidence-based practices (Bailey et al., 2019). Blaustein and Kinniburgh (2017) proposed the Attachment, Self-Regulation, and Competency (ARC) Model, which is a useful tool to guide intervention in these contexts. The ARC Model suggests that it is through secure attachments that caregivers might help adolescents to actively explore and integrate their previous experiences to enhance the capacity to effectively handle the circumstances of the present life (Blaustein & Kinniburgh, 2017).

Additionally, this study revealed that family and peer support are significantly associated with lower psychopathology. This finding suggests that family support should be considered when designing residential care interventions. There is evidence suggesting that close contact with relatives may have a positive impact on adolescents' emotional and behavioral functioning (Assouline & Attar-Schwartz, 2020; Attar-Schwartz & Fridman-Teutsch., 2018; Caserta et al., 2016). Family support may foster adolescents' individual sense that "they matter", enhancing their personal strengths (e.g., self-esteem) and preventing emotional difficulties (Thois, 2011). As such, residential care services must include the family as a resource in their intervention, whenever possible, which can not only enhance its effectiveness but also foster a more adaptive and successful family reunification (Underwood et al., 2004). For instance, family-centered practices in residential care with families should be implemented by staff, who might treat families as full partners in the process (Small et al., 2014). This means that practitioners would establish and maintain close contacts with birth families, enhancing their contacts with adolescents and facilitating a full participation of relatives and adolescents in the daily life of the residential care intervention. As such, a shared responsibility for results and decision-making might improve the success of the intervention (Small et al., 2014). Furthermore, given that adolescence is a developmental period in which relationships with peers are particularly relevant (Durkin, 1995), peers' support was also found to be related to lower psychopathology in this meta-analysis. On the one hand, the role of peers is even more important for adolescents in residential care, as they may have experienced significant changes (home, school, or other residential settings) and loss of significant others (e.g., relatives, peers at school) (Magalhães et al., 2016). On the other hand, in residential care, peers may protect adolescents from disruptive psychological distress (Kumakech et al., 2009) by providing them with a protective context where they can share their feelings, and contributing to their empowerment, well-being, and health (Grych et al., 2015; Hope & Timmel, 1995; Lam et al., 2014; Magalhães et al., 2016).

Finally, this meta-analysis suggests that regulatory strengths significantly predict well-being and competence of adolescents in residential care, but not psychopathology. This finding provides relevant clinical implications for practice in residential care. Although regulatory strengths are not directly associated with a reduction in psychopathology, their association with well-being reveals that mental health is more than the mere absence of psychopathology (Magalhães, 2024). Regulatory strengths, such as self-control, hope, or gratitude, seem to be important vehicles for young people's subjective well-being and other positive outcomes in different contexts (e.g., academic, social) (Orúzar et al., 2019; McCabe & Altamura, 2011;

Russell et al., 2016), which require clinical strategies and interventions based on these strengths (e.g., compassion, gratitude, or mindfulness; Oliveira et al., 2022). Furthermore, these findings raise awareness of the reciprocal and dynamic relationships between individuals (i.e., regulatory strengths) and contextual characteristics (e.g., staff in residential care, family, and peer support). Warm and responsive relationships uphold self-regulation and social skills, which, in turn, can allow youth to build strong relationships (Grych et al., 2015; Murray et al., 2019; Yule et al., 2019). Ecologically oriented interventions are crucial, since regulatory skills can be heightened by co- regulation processes with caring and responsive adults (Blaustein & Kinniburgh, 2017; Murray et al., 2019). Within the residential care context, this means that caregivers: (1) should help adolescents to regulate their emotions in daily situations through appropriate identification, modulation and expression of emotional states (for more details see Blaustein and Kinniburgh, 2017); (2) build a supportive environment that provides expectations, positive norms, and limit setting to support self-regulation and ensure that stress is manageable for any given adolescent; and (3) encourage peer-group interventions to give the chance to these adolescents to form positive social relationships (Cheney et al., 2014; Thompson & Trice-Black, 2012). In sum, an ecological approach which link staff, family and organizations is critical to fostering regulatory strengths. In fact, this approach provides the resources needed for these adolescents to grow positively and succeed (Bell & Romano, 2015), even when they reveal some emotional or behavioral difficulties (Magalhães & Calheiros, 2017).

Moderating effects

Adolescents' age, geographical region of data collection, and type of informant were significant moderators of the association between the protective factors and psychopathology. The results revealed that the younger the adolescents, the smaller the effect of protective factors on psychopathology. Even though older adolescents might have experienced greater exposure to trauma or disruptions (e.g., multiple placements) (Bilson & Baker, 1995), they may also have been in residential care for a longer time than younger adolescents, and therefore might benefit more from stable and protective relationships with the staff. According to the attachment theory, more consistent and uninterrupted relationships allow adolescents to build and maintain relational security with caregivers, which in turn may be protective for them (Pinheiro et al., 2021). Moreover, adolescence is viewed as a window of plasticity for intervention because

youths are particularly susceptible to the effects of environmental quality, especially in the presence of protective factors, such as supportive and positive caregiving (Gunnar et al., 2019).

Regarding the geographic region in which data collection was conducted, the effect of protective factors on psychopathology was larger in studies conducted in North America and Europe than in other regions (e.g., Africa and Asia). This finding might be related to differences between countries or geographic regions in terms of their legal frameworks, cultural dynamics, the profile of young people when entering the system and the reasons for placement (e.g., child maltreatment and/or emotional and behavioral needs) (Del Valle., 2013). Nonetheless, a more comprehensive analysis is required to explore global variations in residential care programs and models, to gain a deeper understanding of this result. Finally, the moderation effect of the type of informant showed that in studies using adolescent reports, the effect of protective factors on psychopathology was larger than those relying on reports of other informants. This result may be due to the larger shared variance in studies using self-report measures from the same type of informant, which calls for multi-informants and multi-methods approaches (i.e., adolescents in residential care, caregivers, teachers; Pinheiro et al., 2021). Nevertheless, it also suggests the importance of respecting youth's expertise in their own experience by including youth self-reports in future research (Hambrick et al., 2014; Calheiros & Patricio, 2014). The Convention on the Rights of the Child (United Nations General Assembly, 1989), advocates for children's and youth's right to participate in their own lived experience which might also be associated with greater well-being (Magalhães et al., 2022).

Limitations and Directions for Future Research

Despite the interesting findings of this meta-analysis, a set of limitations should be noted. First, few studies reported results on the effect of resilient factors on well-being and competence (but not on psychopathology), which may influence the statistical power of random-effects models (Bender et al., 2018). Second, non-published studies were not included, which may impose some publication bias. Third, the trim and fill analyses suggested missing data for the different types of outcomes, indicating that the true effect of some protective factors may differ from the estimated effects in our study. However, the "corrected" effects presented should be interpreted only as indications of potential bias in the data. Fourth, some studies that met the inclusion criteria did not present univariate data and were not included. Relevant moderating variables were examined in this meta-analysis; however, gender was not included as a moderator, because most studies included a mixed sample. In addition, the severity of symptomatology and socio-

economic status were not included in this meta-analysis as moderators, but further evidence is needed as these variables might influence the findings. However, there was insufficient information provided in the primary studies that allowed us to test these moderating effects. Nonetheless, considering a social-ecological perspective, these findings have several implications for guiding future research on resilience among adolescents in residential care. Primarily, future research should focus more on other dimensions of healthy adaptation than just on psychopathology, given that lower levels of internalizing and externalizing symptoms do not imply positive health (Grych et al., 2015). Thus, it is important to explore resilience as a multidimensional concept that includes psychopathology as well as positive outcomes, such as well-being and competence (Grych et al., 2015). Second, future research should include multi-informant approaches, involving caregivers and adolescents simultaneously, to obtain an in-depth understanding of their subjective experiences. Third, longitudinal studies in this field are lacking, and these designs are critical to obtaining a better understanding of resilience as a dynamic process (Grych et al., 2015; Pinheiro et al., 2021). Finally, it seems important that future research involving residential care placements describe residential care programs implemented in facilities with young people.

Implications and Recommendations for Practice and Policy

The current meta-analysis highlights practical implications and important recommendations that might help professionals and policymakers to enhance the well- being of adolescents in residential care considering resilience as a dynamic process. First, the intervention with these adolescents must go beyond the treatment of mental health difficulties (e.g., depression, anxiety, internalizing and externalizing symptoms), and it should also include the promotion of positive outcomes such as well-being and competence (Magalhães & Calheiros, 2017).

Second, to provide more effective and efficient services to these adolescents, policymakers must recognize the complex role of caregivers in these settings. Our results contribute the increasing evidence base identifying caregiver support as one of the most important predictors of adolescents' positive adaptation to out-of-home care (Assouline & Attar-Schwartz, 2020; Magalhães et al., 2021; Pinheiro et al., 2021). Residential care settings must be able to recruit, train, and retain skilled staff (Pinheiro et al., 2022). This entails ensuring the professional capacities to promote secure therapeutic relationships, for example, the capacity to build trust or to be non-judgmental (Pinheiro et al., 2022). It is within relational security that young people can develop their self-regulatory and social skills (Yule et al., 2019). Furthermore, trauma-

informed care at the organizational level might reduce harm to staff in child welfare (Brend & Sprang, 2020). This means providing stable working conditions to support a therapeutic milieu, which also requires an organizational investment to ensure the retention of qualified human resources (e.g., better pay, contracts, and working conditions, supervision, and support to staff), preventing staff turnover and enabling conditions for stable and secure relationships with youth in residential care (Brend & Sprang, 2020; Pinheiro et al., 2022).

Finally, this meta-analysis also clarified the importance of collaboration between child welfare systems, education settings, families, and communities for successful interventions in alternative care. According to the ecological theory of human development (Bronfenbrenner, 1979), children develop through dynamic transactions with their environment, which suggests that it is crucial to consider the contexts in which young people belong (e.g., school, extra-curricular activities). Establishing meaningful relationships should be not limited to the residential care setting, but might include their families (e.g., mother, father, grandparents) and other community contexts.

Figure 3

Results of search strategy based on Prisma (Page et al., 2021)

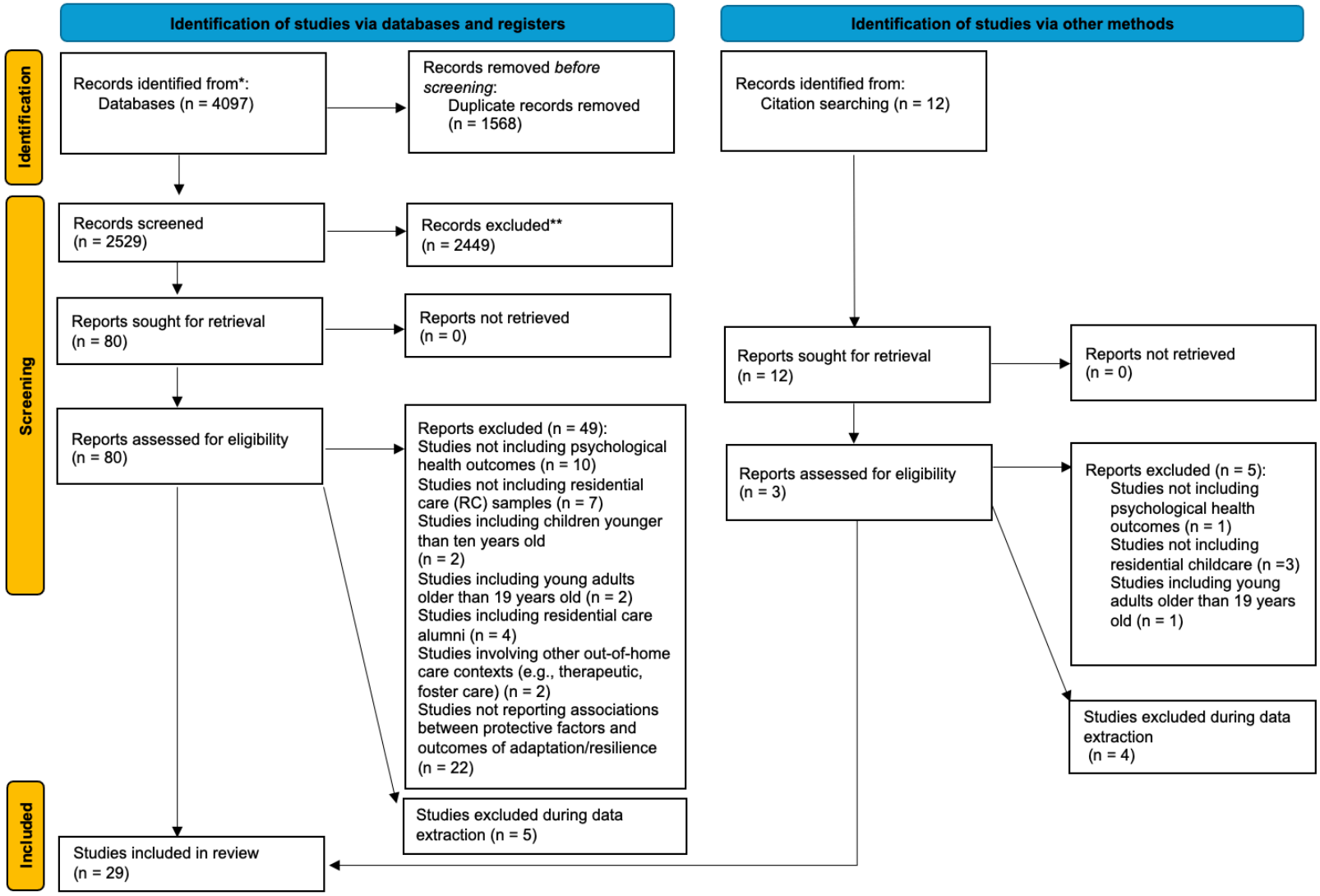


Table 3

Results for the Overall Mean Effect Sizes of Psychopathology

Type of protective factor	# Studies	# ES	Fisher's *z* (SE)	95% CI	Sig. mean z (*p*)	Mean *r*	% Var. level 1	Level 2 variance	% Var. level 2	Level 3 variance	% Var. level 3
Coping	4	42	-.160 (.086)	-0.334, 0.015	.072	-.159	7.53	.071***	36.13	.026***	56.34
Meaning-making strengths	3	7	-.173 (.091)	-0.395, 0.049	.105	-.171	1.81	.027***	69.40	.011	28.79
Regulatory strengths	1	2	.175 (.058)	-0.566, 0.916	.205	.173					
Interpersonal strengths	2	2	.302 (.042)	-0.233, 0.837	.088	.293	100	.000	0.00	.000	0.00
Family support	**5**	**12**	**-.163 (.016)**	**-0.198, -0.128**	**<.001**	**-.162**	100	.000	0.00	.000	0.00
Peer support	**2**	**6**	**-.189 (.032)**	**-0.271, -0.108**	**.002**	**-.187**	100	.000	0.00	.000	0.00
School support	1	3	-.136 (.041)	-0.302, -0.040	.080	-.135					
Staff support	**9**	**38**	**-.156 (.020)**	**-0.197, -0.116**	**<.001**	**-.155**	39.33	.001**	26.57	.002	34.10
General support	3	9	-.202 (.105)	-0.445, 0.041	.091	-.199	1.68	.003***	8.85	.030*	89.47

Note. # Studies = number of studies; # ES = number of effect sizes; SE = standard error; CI = confidence interval for Fisher's *z*; Sig. mean *z* = level of significance of mean effect size; Mean *r* = mean effect size (Pearson's correlation); % var = percentage of variance; Level 2 variance = variance between effect sizes within studies; Level 3 variance = variance between studies.
* $p < .05$; ** $p < .01$; *** $p < .001$

Table 4

Results for the Overall Mean Effect Sizes of Well-being

Type of protective factor	# Studies	# ES	Fisher's *z* (SE)	95% CI	Sig. mean z (*p*)	Mean *r*	% Var. level 1	Level 2 variance	% Var. level 2	Level 3 variance	% Var. level 3
Coping	2	6	.222 (.208)	-0.313, 0.756	.335	.215	5.98	.000	0.00	.083*	94.02
Meaning-making strengths	2	2	.360 (.123)	-1.204, 1.923	.210	.345	10.93	.014	44.54	.014	44.54
Regulatory strengths	**1**	**3**	**.404 (.029)**	**0.278, 0.530**	**.005**	**.383**					
Family support	4	4	.191 (.072)	-0.039, 0.422	.077	.189	8.21	.009	45.90	.009	45.90
Peer support	3	3	.296 (.081)	-0.052, 0.643	.067	.288	11.75	.009	44.13	.009	44.13
Staff support	**5**	**21**	**.292 (.019)**	**0.254, 0.331**	**<.001**	**.284**	36.48	.005**	63.52	.000	0.00
General support	3	3	.445 (.165)	-0.264, 1.155	.114	.418	8.03	.037	45.98	.037	45.98

Note. # Studies = number of studies; # ES = number of effect sizes; SE = standard error; CI = confidence interval for Fisher's *z*; Sig. mean *z* = level of significance of mean effect size; Mean *r* = mean effect size (Pearson's correlation); % var = percentage of variance; Level 2 variance = variance between effect sizes within studies; Level 3 variance = variance between studies.
* $p < .05$; ** $p < .01$; *** $p < .001$

Table 5

Results for the Overall Mean Effect Sizes of Competence

Type of protective factor	# Studies	# ES	Fisher's *z* (SE)	95% CI	Sig. mean z (*p*)	Mean *r*	% Var. level 1	Level 2 variance	% Var. level 2	Level 3 variance	% Var. level 3
Regulatory strengths	**3**	**3**	**.383 (.072)**	**0.072, 0.693**	**.034**	**.365**	32.76	.005	33.62	.005	33.62
Staff support	**3**	**3**	**.247 (.042)**	**0.068, 0.427**	**.027**	**.242**	100	.000	0.00	.000	0.00
General support	2	18	-.015 (.192)	-0.420, 0.389	.938	-.015	7.77	.000	0.00	.071***	92.23

Note. # Studies = number of studies; # ES = number of effect sizes; SE = standard error; CI = confidence interval for Fisher's *z*; Sig. mean *z* = level of significance of mean effect size; Mean *r* = mean effect size (Pearson's correlation); % var = percentage of variance; Level 2 variance = variance between effect sizes within studies; Level 3 variance = variance between studies.
* $p < .05$; ** $p < .01$; *** $p < .001$

Table 6

Results for Categorical Moderators – Psychopathology

Moderators	# Studies	# ES	Intercept (95% CI) / mean *z* (95% CI)	Mean *r*	*β* (95% CI)	*F* (df1, df2)[a]	*p*[b]	Level 2 variance	Level 3 variance
Age	15	100	-.130 (-0.185, -0.075)	-.129	-0.033 (-0.062, -0.005)	5.294 (1, 98)	**.024**	.007***	.009***
Type of placement						0.494 (1, 119)	.484	.009***	.013***
Residential care (RC)	9	78	-.162 (-0.245, -0.078)	-.161					
Combined	7	43	-.118 (-0.168, 0.080)	-.117	0.044 (-0.080, 0.168)				
Geographical region of data collection						6.923 (2, 118)	**.001**	.008***	.008***
Europe (RC)	8	74	-.183 (-0.253, -0.113)	-.181					
North America	2	9	-.297 (-0.443, -0.151)	-.289	-0.114 (-0.276, 0.048)				
Others	6	38	-.032 (-0.112, 0.049)	-.032	0.151 (0.050, 0.253)				
Informants						7.812 (1, 119)	**.006**	.008***	.009***
Adolescents (RC)	13	95	-.167 (-0.223, -0.111)	-.165					
Others (caregivers, teachers)	4	26	-.057 (-0.137, 0.022)	-.057	0.110 (0.032, 0.188)				

Note. # Studies = number of studies; # ES = number of effect sizes; Mean *r* = mean effect size (*r*); CI = confidence interval; *β* = estimated regression coefficient; RC = reference category; Level 2 variance = variance between effect sizes within studies; Level 3 variance = variance between studies.

[+] $p < .10$; * $p < .05$; *** $p < .001$.

[a] Omnibus test of all regression coefficients in the model.

[b] p-value of the omnibus test.

Table 7

Results for Categorical Moderators – Well-being

Moderators	# Studies	# ES	Intercept (95% CI) / mean *z* (95% CI)	Mean *r*	*β* (95% CI)	*F* (df1, df2)[a]	*p*[b]	Level 2 variance	Level 3 variance
Age	11	42	.278 (0.189, 0.367)	.271	0.026 (-0.034, 0.087)	0.779 (1, 40)	.383	.007***	.016***
Type of placement						0.109 (1, 40)	.743	.007***	.017***
Residential care (RC)	6	27	.292 (0.166, 0.418)	.284					
Combined	5	15	.262 (0.130, 0.395)	.256	-0.030 (-0.213, 0.153)				
Geographical region of data collection						2.733 (2, 39)	.077	.008***	.008***
Europe (RC)	4	21	.246 (0.117, 0.375)	.241					
North America	2	4	.472 (-0.286, 0.657)	.440	0.226 (0.000, 0.452)				
Others	5	17	.230 (0.119, 0.342)	.226	-0.015 (-0.186, 0.155)				

Note. # Studies = number of studies; # ES = number of effect sizes; Mean *r* = mean effect size (*r*); CI = confidence interval; *β* = estimated regression coefficient; RC = reference category; Level 2 variance = variance between effect sizes within studies; Level 3 variance = variance between studies.

[+] $p < .10$; * $p < .05$; *** $p < .001$.

[a] Omnibus test of all regression coefficients in the model.

[b] p-value of the omnibus test.

Table 8

Results for Categorical Moderators – Competence

Moderators	# Studies	# ES	Intercept (95% CI) / mean *z* (95% CI)	Mean *r*	*β* (95% CI)	*F* (df1, df2)[a]	*p*[b]	Level 2 variance	Level 3 variance
Age	5	23	.254 (0.156, 0.351)	.249	-0.009 (-0.041, 0.022)	0.400 (1, 21)	.534	.001	.006
Type of placement						0.112 (1, 22)	.741	.001	.047***
Residential care (RC)	3	5	.165 (-0.108, 0.438)	.164					
Combined	3	19	.227 (-0.043, 0.497)	.223	0.062 (-0.322, 0.445)				
Informants						2.520 (1, 22)	.127	.001	.028**
Adolescents (RC)	4	22	.277 (0.094, 0.461)	.270					
Others (caregivers, teachers)	2	2	.029 (-0.239, 0.296)	.029	-0.248 (-0.573, 0.076)				

Note. # Studies = number of studies; # ES = number of effect sizes; Mean *r* = mean effect size (*r*); CI = confidence interval; *β* = estimated regression coefficient; RC = reference category; Level 2 variance = variance between effect sizes within studies; Level 3 variance = variance between studies.

[+] $p < .10$; * $p < .05$; *** $p < .001$.

[a] Omnibus test of all regression coefficients in the model.

[b] p-value of the omnibus test.

Table 9

Results for the Overall Mean Effect Sizes of Psychopathology after conducting trim and fill analyses

Type of protective factor	# Studies	# ES	Fisher's *z* (SE)	95% CI	Sig. mean z (*p*)	Mean *r*
Coping	10	48	-.108 (.038)	-0.183, -0.033	.005	-.108
Meaning-making strengths	5	9	-.246 (.069)	-0.381, -0.111	<.001	-.241
Regulatory strengths	2	3	.117 (.067)	-0.015, 0.249	.084	.116
Interpersonal strengths	-	-	-	-	-	-
Family support	6	13	-.166 (.016)	-0.197, -0.135	<.001	-.164
Peer support	5	9	-.200 (.028)	-0.254, -0.146	<.001	-.197
School support	-	-	-	-	-	-
Staff support	16	45	-.134 (.012)	-0.158, -0.110	<.001	-.133
General support	5	11	-.197 (.045)	-0.285, -0.108	<.001	-.194

Note. # Studies = number of studies; # ES = number of effect sizes; SE = standard error; CI = confidence interval for Fisher's *z*; Sig. mean *z* = level of significance of mean effect size; Mean *r* = mean effect size (Pearson's correlation).
* $p < .05$; ** $p < .01$; *** $p < .001$

Table 10

Results for the Overall Mean Effect Sizes of Well-being after conducting trim and fill analyses

Type of protective factor	# Studies	# ES	Fisher's *z* (SE)	95% CI	Sig. mean z (*p*)	Mean *r*
Coping	3	7	.113 (.066)	-0.017, 0.242	.088	.113
Meaning-making strengths	3	3	.471 (.138)	0.201, 0.741	<.001	.439
Regulatory strengths	-	-	-	-	-	-
Family support	-	-	-	-	-	-
Peer support	-	-	-	-	-	-
Staff support	7	23	.304 (.019)	0.268, 0.341	<.001	.295
General support	-	-	-	-	-	-

Note. # Studies = number of studies; # ES = number of effect sizes; SE = standard error; CI = confidence interval for Fisher's *z*; Sig. mean *z* = level of significance of mean effect size; Mean *r* = mean effect size (Pearson's correlation).
* $p < .05$; ** $p < .01$; *** $p < .001$

Table 11

Results for the Overall Mean Effect Sizes of Competence after conducting trim and fill analyses

Type of protective factor	# Studies	# ES	Fisher's *z* (SE)	95% CI	Sig. mean z (*p*)	Mean *r*
Regulatory strengths	-	-	-	-	-	-
Staff support	4	4	.250 (.039)	0.174, 0.326	<.001	.245
General support	9	25	.098 (.025)	0.049, 0.147	<.001	.098

Note. # Studies = number of studies; # ES = number of effect sizes; SE = standard error; CI = confidence interval for Fisher's *z*; Sig. mean *z* = level of significance of mean effect size; Mean *r* = mean effect size (Pearson's correlation).
* $p < .05$; ** $p < .01$; *** $p < .001$

CHAPTER V

Resilience in residential care: a qualitative study based on the voices of adolescents

This study was published as

Pinheiro, M., Magalhães, E., & Baptista, J. (2024). Resilience in residential care: A qualitative study based on the voices of adolescents. *Children and Youth Services Review*, 107694. https://doi.org/10.1016/j.childyouth.2024.107694

Note: Supplementary data to this article can be found online at https://doi.org/10.1016/j.childyouth.2024.107694

Funding

This study was funded by the Portuguese Foundation for Science and Technology through an individual doctoral grant (Grant Number: 2021.06556.BD; https://doi.org/10.54499/2021.06556.BD) and funds allocated to CIS-Iscte (ISCTE-IUL; UID/ PSI/03125/2020).

Abstract

Young people placed in residential care are at an increased risk of a wide range of emotional and behavioral difficulties. Some of them deteriorate in psychological outcomes, some show no changes, and some show healthy psychological outcomes. Recent research has identified protective factors of adolescents' psychological health outcomes in residential care, framed on the *Resilience Portfolio Model.* However, to the best of our knowledge, studies using qualitative designs are scarce. This qualitative study aimed to identify adolescents' perspectives on the concept of resilience and identify their perspectives on protective factors for psychological health. Nineteen adolescents (12-17 years old; M = 14.21; 57.9% male) from three non-specialized residential care settings in Portugal participated in this study, answering to a semi-structured interview. Data were analyzed using content analysis, and the results revealed that our participants identified specific factors in residential care (e.g., staff and peer support) and out-of-care (e.g., family) contexts that are relevant to their resilience outcomes. The childcare system should consider adolescents' resilience portfolios by fostering individual assets and contextual protective factors to promote positive outcomes.

Keywords

Residential Care; Adolescents; Resilience; Adaptation; Qualitative Study

Introduction

Studies suggest that young people[2] in residential care have high levels of psychological and behavioral difficulties (e.g., peers' problems, depression, or anxiety) (Gutterswijk et al., 2022; Magalhães et al., 2016; Magalhães & Calheiros, 2017; Magalhães & Camilo, 2023; Simsek et al., 2007), when compared with the normative population (Oriol et al., 2014; Rodrigues et al., 2019; Soriano-Díaz et al., 2023) or placed in foster care (Leloux-Opmeer et al., 2016). The literature tends to focus on risk factors and negative outcomes (Jozefiak et al., 2016; Grych et al., 2020); however, despite the traumatic experiences of young people, some exhibit positive adaptation and resilience outcomes (Lou et al., 2018; Pinheiro et al., 2021). Research on resilience is highly relevant in the out-of-home care system as young people living in care often experienced trauma and adverse family circumstances (e.g., abuse and neglect) (Bell & Romano, 2015; Gutterswijk et al., 2022). Furthermore, studying protective factors that foster adolescents' resilience outcomes is essential as may inform policymakers and determine the best intervention strategies in residential care (Pinheiro et al., 2021).

Theoretically, resilience can be conceptualized as a fixed attribute (Goldstein & Brooks, 2005; Wagnild & Young, 1993) or a dynamic process (e.g., Cichetti, 2013; Luther et al., 2000; Vella & Pai, 2019). In the present study, resilience is anchored in this last perspective (e.g., the *Resilient Portfolio Model;* Grych et al., 2015) highlighting a lifespan and ecological perspective, in which the interactions between stressors, risk and protective factors can affect a child's life adaptation at a particular time and across his/her lifecycle (Grych et al., 2015; Vella & Pai, 2019). The *Resilient Portfolio Model* assumes that resilient trajectories after exposure to adversity can be explained by the dynamic role of protective factors (Grych et al., 2015). Based on this framework, previous studies have identified protective factors at different ecological levels (e.g., assets - self-regulatory strengths - and resources from different contexts – family, residential care, and community) that are particularly significant for the psychological health outcomes (i.e., symptoms, well-being, and competence) of adolescents in residential care (Pinheiro et al., 2021). Specifically, individual assets (e.g., cognitive skills, emotional regulation, empathy), coping strategies, and contextual resources (e.g., family support and caregivers' support in residential care) are particularly important protective factors for adolescents' healthy adaptation in residential care. Different dimensions of social support (i.e., emotional, instrumental, and financial support) from family and care workers seem to foster

[2] The term "young people" refers to children and adolescents

positive adaptation of adolescents in these settings (Ferreira et al., 2020; Magalhães et al., 2021; Pinheiro et al., 2021; 2022). These findings suggest the importance of exploring protective factors at different levels (individual and contextual), anchored in the theoretical perspective of resilience as a dynamic process (rather than viewing resilience as a stable individual attribute) (Grych et al., 2015; Pinheiro et al., 2021; Yule et al., 2019), and including a multidimensional perspective of health (Grych et al., 2015; Huber, 2011). The *Resilience Portfolio Model* conceptualizes mental health as involving both well-being and symptoms (Grych et al., 2015; Magalhães & Calheiros, 2017; Magalhães, 2024). In fact, the literature on resilience outcomes for adolescents in residential care may benefit from this multidimensional perspective, considering that a lack of psychological problems does not mean achieving positive mental health (Huber, 2011; Magalhães, 2024).

Despite progress made in identifying protective factors associated with adolescents' psychological adaptation in residential care, most studies are quantitative (Pinheiro et al., 2021). Therefore, qualitative designs may offer additional insights into the voices of adolescents in these settings, thus providing an understanding of their perspectives on resilience. In fact, studies including adolescents' perspectives, meanings, or subjective experiences of protective factors for positive adaptation in residential care are still needed (Pinheiro et al., 2021). This participatory study is focused on adolescents in residential care as the "experts" of their lives (Calheiros & Patricio, 2014), drawing attention to their voices and experiences as particularly relevant to our understanding of resilience in care. This approach may enable an in-depth understanding of their perspectives, which is an important way to empower them. Additionally, to the best of our knowledge, studies anchored on resilience portfolios of adolescents in residential care are lacking (Pinheiro et al., 2021). Thus, we aim to address some of these gaps, going beyond the traditional approach that merely focuses on risk factors or difficulties, framing our study on a well-recognized theoretical model of resilience (i.e., the *Resilience Portfolio Model*; Grych et al., 2015) and exploring adolescents' subjective experiences in Portuguese non-specialized residential care settings. Contrary to most European countries, for young people who are separated from their biological families because of protection concerns, residential care is predominant in Portugal (ISS, 2023). According to the last Portuguese national report, 6347 young people are placed in residential care, of 5344 are placed in non-specialized residential care facilities (i.e., care and supported accommodation only – no in-home education or treatment services), and the others are placed in specialized units (e.g., 122 young people in therapeutic residential care for young people with identified mental health or

behavioral needs, cf. Whittaker et al., 2016) and 164 young people in residential care facilities which aim to foster their autonomy and independent life skills). Most of this group, in non-specialized residential care, comprised adolescents (ages range 12-17 years old; 51%) and males (52%) (ISS, 2023). Behavioral problems were the most frequently identified in this group, and the age with the highest incidence of behavioral problems was 15–17 years (ISS, 2023).

In sum, in this study, we aim to identify (a) adolescents' perspectives on the resilience concept, (b) their perspectives on protective factors to resilience outcomes, and (c) which protective factors are perceived as the most important for their psychological health.

Method

Participants

Nineteen adolescents living in three Portuguese non-specialized residential care settings, aged 12–17 years (M = 14.21, SD = 1.75), and mostly male (57.9%) participated in this study. Most of the adolescents are Portuguese (89.5%), one is German, and one is Cape Verdean. Regarding educational level, most of them were in the 7th grade (36.8%), four in the 6th grade (21.1%), three in the 8th grade (15.8), three in the 9th grade (15.8), one in the 10th grade (5.3%), and one in the 5th grade (5.3%).

The mean number of previous traumatic events experienced by an adolescent was 1.86 (SD = .06), ranging from 1 to 14 events. Ninety-four percent of the sample were exposed to two or more events. Specifically, most of them were neglected (68.4%); 36.8% experienced interference with caregiving (e.g., if at some time it was expected that someone would take care of the children but he/she was unable to do it for some reason, for example, mental issues or substance use), and the same percentage of adolescents were exposed to bullying; 26.3% were victims of domestic violence; 15.8% were sexually abused and the same percentage of adolescents were psychologically abused; 10.5% experienced bereavement of a close person; and finally, the same percentage (5.3%) was found for the following events: experienced witnessed a serious accident; experienced illness or medical trauma; experienced community violence; experienced physical assault; experienced physical abuse; and witnessed a suicide attempt. Considering the overall time since they entered the care system, on average, they were in care for 25 months (ranging from one month to 10 years). Regarding the adolescents' case plans, for most, the intervention plans involved remaining placed in residential care (47.4%),

followed by family reintegration (in their nuclear family: 36.8%), autonomy/independent life preparation (10.5%), and family reintegration in the extended family (5.3%).

All three non-specialized residential care settings that participated in this study were mixed (i.e., including both girls and boys), hosting between 17 and 42 young people during the data-collection period.

Measures

Sociodemographic Questionnaire

A sociodemographic questionnaire was filled out by adolescents (e.g., age, gender, educational year) and another by care workers in residential care focused on adolescents' previous history within the child protection system, reasons for placement, number of placements, and their contacts with the family.

UCLA PTSD Reaction Index for DSM-5

The UCLA PTSD Reaction Index for DSM-5 (PTSD-RI-5 caregivers; Kaplow et al., 2020; Steinberg et al., 2013; Portuguese version from Ramos et al., 2022) was completed by six residential care workers for each adolescent who participated in this study. This measure aims to evaluate and diagnose the presence of Post-Traumatic Stress Disorder symptoms, based on DSM-5 criteria (i.e., B ‐ Intrusiveness, C ‐ Avoidance, D ‐ Cognition and mood negative changes, E ‐ Reactivity changes) and dissociative symptoms on a five-point *Likert* scale, which 0 represents "None" and five represents "Most of the time". This instrument can be applied to young people aged 7–17 years. In the current study, only the traumatic history profile of the PSPT-RI-5-caregivers was administered, which allowed the assessment of the child's exposure (i.e., victim, witness, or knowledge) to 22 possible traumatic events: serious injury, illness/medical trauma, community violence, domestic violence, school violence/school emergency, physical assault, disaster, sexual abuse, physical abuse, neglect, psychological maltreatment/emotional abuse, interference with caregiving, sexual assault, kidnapping/abduction, terrorism, bereavement, separation, war/political violence, forced displacement, trafficking/sexual exploitation, bullying, and witnessed suicide.

Semi-structured interview

Based on theoretical assumptions from the *Resilience Portfolio Model* (Grych et al., 2015), a semi-structured interview script was developed and organized into five thematic sections (see

Table 1S for more details in the appendices section). The first thematic section aimed to identify adolescents' conceptions of the resilience concept (e.g., "*If you were asked to explain what the concept of resilience is, what would you say?*") and resilient outcomes (e.g., *"How do you realize that a young person who has experienced bad things is still well/resilient?*"). If the adolescent did not provide a definition of resilience, the first author provided a resilience definition according to the theoretical model by Grych et al., (2015) using developmentally appropriate language to ensure that they understood. To identify the similarities and specificities of resilient factors in and out-of-care, the script involved a second thematic section aimed at identifying protective factors for the positive adaptation and resilience of adolescents not in care (e.g., "*When you think about a resilient young person, what do you think has contributed to his/her resilience?")*, followed by a third section that focused on resilience factors for adolescents in residential care (e.g., "*When you think about a resilient young person in residential care, what do you think has contributed to his/her resilience?"*).

The fourth thematic section aimed to identify the protective factors highlighted by participants as the most meaningful for their mental health outcomes (e.g., "*Regarding the factors you identified earlier, which are the most determinant factors for you?").* Finally, the researcher concluded the interview by debriefing, and provided an opportunity to answer any questions or comments that might have arisen. For parsimonious reasons, in the current study, we are focused only on the results obtained from the first, third, and fourth sections of this interview.

Data collection and analyses

This study was approved by the Ethical Committee of the University (Ref. 105/2021). Convenience sampling approach was used to recruit adolescents from three non-specialized residential care settings. Specialized residential care facilities (e.g., providing treatment for young people's emotional and behavioral problems) and juvenile corrective settings were not included. The selected settings were invited by e-mail to participate in the study. An online meeting (in Zoom app) was arranged between the researcher and the directors of the three residential settings to explain the main objectives of the study and the inclusion criteria of participants: a) adolescents aged 12 to 17 years, and b) those who understood Portuguese. The exclusion criterion was to have significant cognitive impairment that could inhibit young people from filling out a self-reported measure and responding to an interview.

Consent and informed assent were obtained from the youth's legal guardian, and the adolescents themselves, respectively. The care workers also provided consent to participate in the study and to complete the questionnaires. Participants were informed about the study's conditions (objectives, duration, audio record), the voluntary nature of their participation, the right to drop out, and the guarantee of data confidentiality. The participants were also made aware that the audio recording of the interview would be deleted once the content had been transcribed. After the informed consent procedure, the participants stated that they understood all the information and agreed to participate. Of the three residential care facilities, 21 adolescents met the inclusion criteria and were recommended to participate in this study, but one did not consent to participate, and another dropped out (in both cases, the adolescents were uncomfortable with the need to record the semi-structured interview).

The first author carried out the data collection in each non-specialized residential care setting. First, adolescents responded to a set of questionnaires (but only sociodemographic information will be reported in the current study), and then semi-structured interviews were conducted with the same structure and sequence of questions followed. Second, care workers filled out questionnaires about the adolescents' characteristics (e.g., the reason for entering into residential care, case plan, contacts with relatives) and the UCLA PTSD Reaction Index for DSM-5 (the traumatic history profile). Data were collected between March 2022 and June 2022. The time spent completing the entire self-report measures and semi-structured interviews ranged from 15 to 40 minutes.

Descriptive statistics were performed using *IBM SPSS software* (version 28), and *MAXQDA software* (version 22) was used to analyze the qualitative data and coding categories. In this study, a content analysis approach was used (Elo & Kyngas, 2008), which involved (1) *preparation* (i.e., knowing the data, selecting the unit of analysis, and deciding on the analysis of manifest content or latent content), (2) *organizing* (i.e., macro-categories, categories, and subcategories were created, which were associated with a description), and (3) *reporting* (i.e., reporting the analysis process and the findings through a conceptual map of categories). A mixed data analytic approach was adopted to code the material (i.e., first, inductive codification was implemented followed by a top-down approach based on the theoretical framework, specifically, to name and structure the categories). The coding categories were created to address our research aims, specifically looking at the content from the different sections of our interview, as these sections provided context for the coded qualitative content. Data were collected and reported bearing in mind the thirty-two-item checklist of the COREQ, developed

for reporting qualitative research (i.e., interviews or focus groups; Tong et al., 2007) in terms of three domains: (1) research team and reflexivity, (2) study design, and (3) data analysis and reporting (see Table 2S for more details in the appendices section). The validity and trustworthiness of the coding categories were guaranteed by a systematic discussion of all categories among the three researchers, providing meaningful examples of adolescent reports, and through the co-coding of 30% of the material by an independent researcher. The inter-coding agreement was tested using the Cohen Kappa coefficient (Landis & Koch, 1977), and a perfect agreement (kappa =0.946) was obtained. Data saturation was achieved on the 17th interview. For each category, meaning units considered particularly illustrative were selected, including excerpts of the participants' statements that were coded. The results were described by presenting the number of adolescents who reported a category (n) and the frequency of meaning units per category (*f*).

Results

Six macro categories, twenty-two categories, and thirty-four subcategories were identified and are detailed below (Table 12).

Adolescents' perspectives on resilience concept and resilience outcomes

Resilience concept

Regarding the *Resilience concept,* three categories were identified. Most of our participants revealed a *Lack of Knowledge* about the concept of resilience (e.g., *"I don't know what resilience is. I think that I have never heard about it";* P3, 12 years, male), and when young people provide a definition, they suggest that it involves individual characteristics such as *Don't give up* (e.g., "*I would say it's like not giving up, and always fighting... Not giving up*"; P19, 13 years, male), or *Being nice and special* (e.g., "*Must be a special person*"; P7, 16 years, male) and *Being competent* (e.g., "*Be resilient is to demonstrate the competent... start a thing and does not end soon. Having resilience, being able to do this thing, I guess…";* P1, 15 years, male). Finally, some *Misunderstandings about the concept* were also reported by our participants*,* which means that they have heard about the concept, but they do not know how to define it, or it is difficult to explain (e.g., "*I have heard about this concept, but I do not know what is very well*"; P5, 16 years, male).

Resilience outcomes

When the outcomes of resilience were explored, three categories were found: *Competence, Emotional and Behavioral Adaptation,* and *Well-being. Competence* involves positive outcomes such as *Interpersonal and Social Competence* by interacting with others (e.g., "*The way he talks with people, how he interacts";* P5, 16 years, male) and *Academic competence* (e.g., "*If he did well in school, he got good grades*"; P10, 16 years, male). The *Emotional and Behavioral Adaptation* category means that adolescents appropriately behave, fulfil typical roles in society and be emotionally and behaviorally adapted to their contexts in an appropriate and effective way, and includes aspects related to *Adaptative behavior* (e.g., "*Through his behavior, a good behavior*"; P14, 17 years, female), *Emotional adaptation* (e.g., *"Through your psychological behavior";* P5, 16 years, male), and *High self-esteem* (e.g., "*Liking yourself";* P12, 12 years, female). Finally, *Well-being* outcomes included dimensions such as *Happiness* (e.g., *"If he is happy";* P6, 15 years, female) and *Quality of life* (e.g., "*Through his life, if his life went well*"; P10, 16 years, male).

Resilience Portfolio for adolescents in residential care

Three macro categories were found for the protective factors perceived by our participants as explaining resilient trajectories of adolescents in residential care: *Residential care context, Out-of-care contexts, and Young people's variables.*

Residential care context factors

Our participants identified a set of contextual factors related to the residential care (RC) setting as protective for young people's resilience when living in this specific developmental context. Specifically, they recognized different *Sources of social support* in residential care*,* including diverse *Types of support provided,* their involvement in a set of *Activities in RC,* and the existence of a *Therapeutic milieu.* Regarding the *Sources of social support*, all adolescents suggested the relevant role of *staff support* (i.e., care workers, caregivers, or monitors) (e.g., *"The caregivers, the care workers in the house, (...) the care workers and monitors";* P14, 17 years, female), followed by support provided by *Peers* (e.g., *"Colleagues here in the house";* P7, 16 years, male). Moreover, *Frequent contact with relatives* was perceived as a way to foster psychological adaptation in care (e.g., "*I guess having visits from the mother's, father's or brother's relatives*"; P7, 16 years, male) as well as establishing *Positive relationships* in this context (e.g., "*I have a good relationship with almost everyone here*"; P7, 16 years, male).

Most of the adolescents documented the importance of *Emotional support* provided by staff and peers in residential care, for instance, being available and caring about the adolescents' feelings (e.g., "*Show that we are not alone. I speak for myself because when I walked in here the only thing I did was cry because I thought… ok, I'm here in a place alone where I don't know anyone and they were a great support they told me that I was not alone, that I was here for my life to change and that it was just a phase";* P16, 16 years, female). Still on the type of support, *Instrumental support,* which means receiving guidance on the daily routines and rules in residential care (e.g., *"I changed routines and had rules. And I also think these rules were an essential point for me to achieve. I liked the rules by chance. It is just that in the past I did not have rules, so I think the rules are essence";* P1, 15 years, male) and *Financial support,* which means receiving money and helping them to manage their allowance (e.g., *"Our caregivers take care of our allowance and then we have our reference educators from whom we ask for clothes, to ask for an advance allowance and so on";* P14, 17 years, female) were also identified by adolescents as particularly important to a resilient trajectory in care.

Finally, having *Activities in RC* that enable young people to relax and distract themselves (e.g., *"Going to the beach, pools, youth vacations. Several things for young people not to stay at home and do nothing, to distract themselves";* P12, 12 years, female) as well as living in a residential care setting which is *Therapeutic* through the resources it provides were also highlighted (e.g., "*It didn't work for me to stay at home, the residential care home is helping me even if it's a short period. Maybe if I am here, I can reach the goals I could not reach at home*"; P16, 16 years, female).

Out-of-care context variables

The macro category *Out-of-care* (OFC) *contexts* include four categories related to the social ecology outside the residential care setting that may impact young people's resilience: *Support in OFC, Type of support provided in OFC, Participation in extracurricular activities,* and *Security*. *Family support* (e.g., "*The family outside*"; P11, 14 years, male) from the mother, father, brother, and extended family was identified as the most important source of support in the out-of-care setting. Adolescents also pointed out that the resilience of adolescents in residential care may be derived from *Social support at school, such as from teachers* (e.g*., "School, having classes, the teachers";* P10, 16 years, male), and from *Peers* outside the residential care context (e.g., *"Having friends";* P11, 14 years, male).

Regarding the type of support provided outside the residential context, most of the adolescents considered that receiving *Emotional support in OFC* provided by family, peers, and school is important for their resilient outcomes in residential care (e.g., "*They supported me and showed me that this was not why I should change my behavior or be more ... sometimes young people change their attitude towards people and become colder, more closed off, more withdrawn. This usually happens in most situations, but if the family is supportive and shows that they are there, talk, communicate with us, and we see that person is with us, and we feel safe";* P15, 13 years, female). Also, *Instrumental support in OFC* was reported by our participants as an important type of support, which means having someone out of the care setting who offers practical help and orientation on the daily routines (e.g., *"My grandfather always came to pick me up every day. Then I went to my grandparents' house for four years and they always took care of me, and my grandmother also took great care of me at that time";* P14, 17 years, female).

Finally, participating *in Extracurricular activities* provides an important sense of empowerment to achieve resilient outcomes (e.g., "*Being able to play football makes me feel that I can have a good future, it makes me feel good, it makes me feel that I am good and it makes me feel I am overcome*"; P19, 13 years, male), which is also foster by feeling in a secure place (*Security*) (e.g., *"If it's a safe place I feel good";* P17, 12 years, male).

Young people's variables

Regarding individual variables, the participants of this study reported *Coping strategies* and *Individual characteristics* as important protective factors for adolescents in residential care. A diversity of *Coping strategies* were identified, mostly including *Meaning-making activities* such as engaging in enjoyable activities (e.g., "*So I don't get upset is doing something I like, as such sport, breathing, something like that*"; P3, 12 years, male), *Avoidant* coping (i.e., to forgot what happened or avoid to think about difficult situations) (e.g., *"Not thinking about problems because problems sometimes bring a lot of restlessness to the person";* P1, 15 years, male) and *Overcoming,* adopting strategies to strive to overcome and take on new challenges (e.g., "*I always try to overcome new challenges*"*;* P1, 15 years, male). Moreover, even if less reported, our participants also highlighted that *Help seeking* coping*,* for instance from an adult, might help them deal with stressful situations (e.g., "*There are things that I can control on my own and there are others that I need someone smarter about and for that I like to talk to my brother*"*;* P15, 13 years, female). Finally, *Food consumption as a coping strategy* (e.g., "*The best thing*

for her (fellow in residential care) to calm down is sweets and stuff "; P14, 17 years, female), and *Active problem solving* (e.g., "*I am that person that if I have to speak, I say it to the face and speak directly*"; P15, 13 years, female) were reported by a few adolescents in this study.

Additionally, *Individual characteristics* as protective factors included *Being cooperative*, which means, for instance, being able to fulfill the tasks requested by staff (e.g., "*Comply with it, I think it helps a lot";* P16, 16 years, female) and *Being kind and extrovert* with others (e.g., *"I am nice to the others";* P9, 13 years, male). Moreover, the capacity of *Adaptability* involves the adolescents' ability to adapt themselves to changes in their environment (e.g., "*I adapt well to the things I have been given and the circumstances in which I am adapting well*"; P7, 16 years, male). Few adolescents suggested that having *Self-regulation competence*s (e.g., "*I am calm (...) not upset or nervous*"*;* P7, 16 years, male), and *Being optimistic* about the future (e.g., "*I think just being okay with myself and believing that one day I'll be even better helps me a lot*"; P16, 16 years, female) are relevant individual attributes, but it also depends on the *Singularity* of young people (e.g., "*I think in my opinion it also comes from us. It must come from yourself; I think it depends on a lot from youth to youth*"; P16, 16 years, female).

Meaningful factors of resilience

When asked about the most meaningful factors of resilience, our participants proposed that *Family support* provided by relatives (e.g*., "For me the most important factor is my family";* P14, 17 years, female) is the most important protective factor for their psychological health, followed by having *Meaningful relationships.* These meaningful relationships with staff in residential care and with peers are perceived as providers of affect and kindness (e.g., *"I only chose one… the kindness";* P9, 13 years, male). Moreover, these adolescents also highlighted the specific protective role of *Staff support* provided by care workers and/or caregivers (e.g., *"I think it is the care workers";* P1, 15 years, male), to their resilience. Finally, less expressive was the involvement in *Extra-curricular activities* (e.g*. "For me the most important factor is to do something that I like, that is football";* P3, 12 years, male)*,* the individual attribute of *Self-confidence and overcoming* (e.g., *"I think that most important factor is just being well with myself and believe that one day later I will be even better"*; P16, 16 years, female) and, lastly, the role of *Peers* to their resilient outcomes (e.g. *"The most important is being with my borrowed sister";* P13, 14 years, female).

Table 12

Macro categories, categories, and subcategories about resilience concept and protective factors of psychological health, through the lens of adolescents in residential care

Macro Category	Category	Subcategory
Resilience Concept	Lack of Knowledge (*n*=16; *f*=16)	
	Concept definition (*n*=4; *f*=4)	Don't give up (*n*=1; *f*=1) Being nice and special (*n*=2; *f*=2) Being competent (*n*=1; *f*=1)
	Misunderstandings about the concept (*n*=3; *f*=3)	
Resilience outcomes	Competence (*n*=13; *f*=16)	Interpersonal and Social Competence (*n*=8; *f*=8) Academic competence (*n*=8; *f*=8)
	Emotional and Behavioral Adaptation (*n*=13; *f*=14)	Adaptative behavior (*n*=11; *f*=11) Emotional adaptation (*n*=2; *f*=2) High self-esteem (*n*=1; *f*=1)
	Well-being (*n*=9; *f*=10)	Happiness (*n*=6; *f*=6) Quality of life (*n*=4; *f*=4)
Residential care context	Sources of social support (*n*=19; *f*=54)	Staff support (*n*=19; *f*=19) Peers support (*n*=15; *f*=15) Frequent contact with relatives (*n*=9; *f*=12) Positive relationships (*n*=5; *f*=8)
	Type of support provided (*n*=18; *f*=71)	Emotional support (*n*=18; *f*=45) Instrumental support (*n*=14; *f*=24) Financial support (*n*=1; *f*=1)
	Activities in RC (*n*=8; *f*=19)	
	Therapeutic milieu (RC resources) (*n*=6; *f*=10)	

Out-of-care contexts	Support in OFC (*n*=19; *f*=37)	Family support (*n*=18; *f*=18) Social support at school (*n*=10; *f*=10) OFC peers support (*n*=9; *f*=9)
	Type of support provided in OFC (*n*=19; *f*=59)	Emotional support in OFC (*n*=17; *f*=49) Instrumental support in OFC (*n*=7; *f*=10)
	Participation in extracurricular activities (*n*=8; *f*=14)	
	Security (*n*=2; *f*=2)	
Young people's variables	Coping (*n=8*; *f*=28)	Meaning-making activities (*n*=6; *f*=8) Avoidant (*n*=5; *f*=7) Overcoming (*n*=4; *f*=4) Help-seeking (*n*=2; *f*=6) Food consumption as a coping strategy (*n*=2; *f*=2) Active problem solving (*n*=1; *f*=1)
	Individual characteristics (*n=8*; *f*=21)	Being cooperative (*n*=4; *f*=7) Be kind and extrovert (*n*=3; *f*=5) Adaptability (*n*=3; *f*=4) Self-regulation competences (*n*=2; *f*=3) Being optimistic (*n*=2; *f*=2) Singularity (*n*=2; *f*=2)
Meaningful factors of resilience	Family support (*n*=7; *f*=7) Meaningful relationships (*n*=4; *f*=4) Staff support (*n*=3; *f*=3) Extra-curricular activities (*n*=2; *f*=2) Self-confidence and overcoming (*n*=2; *f*=2) Peers (*n*=1*; f*=1)	

Discussion

This study sought to identify adolescents' perspectives on the resilience concept as well as the protective factors, highlighting those that were perceived by our participants as the most meaningful protective factors for their psychological health. To our knowledge, this is the first qualitative study that includes adolescents' voices in residential care and guided by the *Resilience Portfolio Model* (Grych et al., 2015).

Regarding the first aim of this study, we identified a set of categories that focused on adolescents' perceptions of resilience. Most of our participants revealed a lack of knowledge about the resilience concept, even though some of them identified competence (i.e., interpersonal and social competence, and academic competence), emotional and behavior adaptation (i.e., adaptative behavior, emotional adaptation and high self-esteem), and well-being (i.e., happiness and quality of life) as resilience outcomes. These findings are aligned with the *Resilience Portfolio Model* theoretical assumptions, which claim that mental health is more than the absence of psychopathology (Huber, 2011; Magalhães, 2024), and describe psychological health in terms of competence, symptoms, and well-being (Grych et al., 2015).

Concerning the second and third objectives of this study, our participants proposed a set of protective factors at different levels (e.g., external resources - family, peers, school; and individual strengths – self-regulation, coping), suggesting that family and staff support are particularly meaningful for them, which should be considered when designing interventions in residential care. In fact, social support is one of the most significant predictors of positive adaptation in children exposed to violence (e.g., support provided by the family, Yule et al., 2019). In addition, the role of family in the psychological health of adolescents in residential areas has been well-documented in the literature (Erol et al., 2010; Quisenberry & Foltz, 2013; Segura et al., 2017). If adolescents in residential care perceive that they have support from their family, fewer symptoms of psychopathology (i.e., internalizing and externalizing problems) (Segura et al., 2017) are reported because they probably felt that their family was able to understand their needs, which in turn may enhance their individual self-esteem, adaptative coping strategies, and regulatory strengths (Caserta et al., 2016; Doek, 2014).

Although family remains an important influence, peer and school support are also important for adolescents in residential care, as revealed by them in this study. This reveals that adolescents' resilience outcomes may be influenced by meaningful relationships in different developmental contexts (i.e., residential care group homes, schools, and families).

On one hand, social integration into a peer group is an important context of development during adolescence (e.g., adolescents spend more time with peers; Arteaga & Del Valle, 2003), and it is particularly protective for young people exposed to adversity (Grych et al., 2015). Our findings suggest that residential care facilities should create a peer culture and favorable social climate that fosters trust and acceptance among adolescents, while deterring antisocial conduct (Sonderman, 2020). On the other hand, school support (provided by teachers and monitors) offers an environment in which adolescents can develop supportive relationships with peers and adults (Beld et al., 2019). This environment involves activities that also support youth in developing their emotional, cognitive, and social skills (Kruger & Prinsloo, 2008) and preparing them for their future challenges and decisions (Beld et al., 2019).

Regarding young people's variables, our participants suggested individual characteristics (e.g., self-regulation, being optimist) and coping strategies (e.g., meaning-making activities, avoidant, and help-seeking) as individual assets for resilience outcomes. These results support the existing literature, which suggests that regulatory strengths and coping play key roles in resilience outcomes (Compas et al., 2017). Although emotional regulation and coping are closely related (Gruhn & Compas, 2020), the first one includes adolescents' efforts to manage their emotions under a wider range of stressful situations; on the other hand, coping is exclusively related to the ability to cope with stressful events and the type of strategies adolescents use when faced with adverse experiences (Compas et al., 2017). As such, more coping strategies are likely to be observed in young people who have experienced some type of violence (Yule et al., 2019). Further, coping strategies may foster adolescents' sense of competence and enhance their self-esteem (Pinheiro et al., 2021), and better self-regulation may boost young people's ability for emotional, social, and academic competence (Batki, 2018).

This study shows that coping strategies involving meaning-making activities, avoidant, help-seeking, or active problem-solving seem to influence adolescents' behavioral responses to stressful situations in residential care. Meaning-making activities (i.e., enjoyable activities) and avoidant coping were more reported by adolescents in this study, while active problem-solving strategies were less. As such, if avoidant coping strategies do not provide opportunities for young people to cope effectively with problems (Moreno-Manso et al., 2021), active problem-solving, help-seeking, and meaning-making activities might provide purposeful ways to deal with difficulties and seek comfort and social support. Active

problem-solving has been negatively correlated with internalizing and externalizing symptoms (Moreno-Manso et al., 2021).

Concerning protective factors from the residential care setting, the following factors were highlighted: staff and financial support in residential care, therapeutic milieu (i.e., living in a residential care setting that is *therapeutic* through the resources it provides), and being allowed to have frequent contact with relatives. All participants proposed that staff (e.g., caregivers) working in residential care is a key element of their resilience portfolios. This adolescents' perspective suggests that it is crucial to consider the role of staff in improving adolescents' resilience outcomes in residential care. Specifically, it is important to ensure training to the staff to be more responsive to adolescents' needs (e.g., help adolescents to better understand themselves, particularly their strengths and resources; Hass & Graydon, 2009).

These findings are broadly consistent with previous studies (Magalhães et al., 2021; Pinheiro et al., 2021). For instance, a systematic review conducted by Pinheiro, and colleagues (2021) highlighted the positive impact of caregivers' role in adolescents' psychological adjustment in residential care, particularly when caregivers may help them handle adversities and their daily routines. Furthermore, financial support was reported as a protective factor for positive outcomes in adolescents in residential care. According to our participants, financial support is necessary to meet basic needs, such as those for clothing and school materials. Receiving an allowance may help to prepare adolescents for adulthood, increasing their ability to transition to independence, and to deal with future challenges (Gwenzi, 2019; Liu et al., 2020; Sulimani-Aidan & Benbenishty, 2011). This finding is not surprising since this type of support is described in the *Resilience Portfolio Model* (Grych et al., 2015) as an important resource for individuals' adaptative functioning. Additionally, these types of support have been identified in literature as crucial to the transition to adulthood positively impacting the young people's successful process of autonomy and independence (Gwenzi, 2019). Furthermore, although this study is based on a non-specialized residential care sample, adolescents recognized that living in a residential care context might be therapeutic through the resources provided. The environment and culture of residential care settings may influence resilience and coping strategies (Parry et al., 2023). Existing literature shows that adolescents find it easier to adapt when their surroundings are stable and predictable, and have positive experiences (Hass & Graydon, 2009).

Moreover, our participants suggested that frequent contact with relatives is another aspect that should be considered when discussing adolescents living in this developmental context. These adolescents need to spend quality time with their families, and family/parent engagement and contact with adolescents in residential care should be encouraged to support well-succeed reunification processes. The literature also shows that regular contact with birth families is the most significant protective factor for young people in out-of-home care (Zabern & Boutyre, 2018). Furthermore, Segura et al., (2017) showed that if adolescents perceive that they have great moments with their birth family, lower psychopathology (i.e., internalizing and externalizing problems) is reported. As such, family-centered practices in residential care are crucial, including a meaningful family participation (e.g., parental engagement, family-staff alliance, involvement in daily-routines, and keeping fully informed), which means that information, feelings, and needs shared by the family should be taken into consideration in the intervention, together with adolescents and staff perspectives (Tang et al., 2024).

Limitations and implications

This study provides innovative evidence on the protective factors for adolescents' resilience in residential care; however, a set of limitations should be acknowledged. This study included a convenience sample of adolescents residing in three non-specialized residential care facilities in the same city. As a result, it would be highly beneficial if future research included adolescents in residential care in other parts of the country and from different types of residential care settings. In addition, adolescents' age and placement length in care should be included in future research to frame young people's perceptions of resilience. Finally, in the implementation of the interview, the participants were not reminded of their answers to questions 2 and 3 before responding the question 4. Thus, recency might have influenced how youth responded to this last question, thinking mostly about the examples they had for question 3 (more recent) than interview question 2 (earlier).

Nevertheless, this study has relevant implications for residential care and public intervention policies, shedding light on how residential care settings (e.g., professionals and providers) may support adolescents' positive outcomes. That is, childcare systems and residential care settings should consider all the social ecology to which adolescents in residential care belong, because those adolescents identified assets (i.e., individual attributes) and resources (e.g., the role of caregivers, family, peers, and school) as being

associated with resilience. Based on these findings, four intervention priorities could be highlighted. First, these findings underline the prevailing contribution of families to adolescents' resilience in residential care. Therefore, quality contact with birth families should be carefully ensured, particularly when family reunification is the aim of intervention. Second, providing primacy to youth-caregiver relationship quality is needed, ensuring that staff in residential care receive the necessary training, to guarantee that they can provide appropriate emotional, instrumental, and financial support for adolescents (Pinheiro et al., 2022). Third, since adolescents spend most of their time in school, it is important to engage the school community and their resources to foster resilience of adolescents in residential care. This is especially important when parents are unreliable sources of support (Grych et al., 2015). Finally, individual assets, such as self-regulation and coping strategies, should be considered and fostered. Preparing adolescents to use positive and adaptive coping strategies, including mindfulness, psychotherapy focused on emotions (Perlman et al., 2016), and cognitive restructuring of unhealthy coping beliefs (Magalhães et al., 2021) is recommended.

In sum, through the adolescents' voices, this study provides innovative results about resilience in residential care, which might help practitioners to intervene with them to foster their resilient trajectories and outcomes.

CHAPTER VI

How do care workers portray adolescents' resilience in residential care? a qualitative study

This study is currently under review

Pinheiro, M., Magalhães, E., & Baptista, J. (under review). How do care workers portray adolescents' Resilience in residential care? A qualitative study. *Child & Family Social Work*.

Funding

This study was funded by the Portuguese Foundation for Science and Technology through an individual doctoral grant (Grant Number: 2021.06556.BD; https://doi.org/10.54499/2021.06556.BD) and funds allocated to CIS-Iscte (ISCTE-IUL; UID/ PSI/03125/2020).

Abstract

Adolescents in residential care may achieve positive outcomes despite previous adverse experiences. However, the literature focuses more on negative outcomes than resilience. Supportive relationships between staff and adolescents in residential care are key to ensuring resilience in adolescents. Therefore, staff perspectives need to be explored. This study aimed to identify staff perspectives on resilience factors among adolescents in residential care. Fifteen semi-structured interviews were conducted with a sample of female care workers (aged 23-51 years old; $M = 35.47$, $SD = 8.06$) working in three Portuguese residential care facilities. Care workers outlined resilience as the ability to overcome difficult situations, highlighting the support provided in residential care (e.g., emotional and instrumental), together with personal assets and adaptive coping as protective factors. Also, collaborative approaches between services and significant figures (e.g., family, school, residential care) were reported. This study offers theoretically new insights about the resilience of adolescents in the childcare system and practical implications are discussed.

Keywords

Residential Care; Adolescents; Care workers; Supportive relationships; Resilience; Qualitative approach

Introduction

Adolescents placed in residential care often present with a history of abuse or neglect, which has been linked to an increased risk of developing mental, emotional, and behavioral difficulties (Assouline & Attar-Schwartz, 2020; Magalhães & Calheiros, 2020), compared to those who live with their families (Roache & McSherry, 2021). However, despite past traumatic experiences, adolescents in residential care may exhibit positive adaptation and resilience outcomes (i.e. low psychopathology and high well-being and competence) (Pinheiro et al., 2021). Resilience can be broadly conceptualized from two perspectives: (1) it can be defined as a personality trait or individual attribute (Goldstein & Brooks, 2005; Wagnild & Young, 1993), or (2) it can be defined as a dynamic process in which multiple factors may interact and explain how individuals adapt positively in the face of adversity (Luthar & Cushing, 1999; Masten, 1999). The *Resilience Portfolio Model*, anchored in this second perspective, provides a comprehensive theoretical framework for understanding positive adaptation following violence or trauma (Grych et al., 2015).

The *Resilience Portfolio Model* (Grych et al., 2015) takes a positive psychology perspective (i.e., understanding healthy functioning involves identifying the strengths that enhance individuals' psychological health) and posits that a set of protective factors (i.e., *assets*, *resources,* and *appraisal and coping behavior*) may positively impact individuals' ability to adjust positively. According to this model, *assets* are individual characteristics that include regulatory strengths (e.g., self-regulation, cognitive skills), interpersonal strengths (e.g., forgiveness, empathy), and meaning-making strengths (e.g., religiosity and beliefs). *Resources* are external factors that include supportive relationships from family, friends, or school, as well as environmental factors (e.g., school climate, neighborhood), and *appraisals and coping behavior* are strategies that help individuals respond to stressful situations (Grych et al., 2015). Based on this framework, the set of protective factors represents a unique resilience portfolio that enables healthy functioning, indicating low symptoms and high levels of well-being, competence, or positive affect (Grych et al., 2015).

The literature involving adolescents in residential care shows that individual characteristics such as self-regulation, cognitive skills, or empathy and contextual factors such as supportive relationships (from family, staff in residential care) are positively associated with their psychological health (e.g., fewer symptoms, greater well-being, and competence) (Pinheiro et al., 2021). However, the literature has mainly focused on adolescents' self-reports through

quantitative designs focused on the relationship between risks, protective mechanisms, and happiness (e.g., Maurovic et al., 2014), and/or on the role of resilience resources in the psychological problems of adolescents in residential care (e.g., Segura et al., 2017). As such, there is a lack of qualitative studies focusing on care workers' perspectives on resilience in residential care (Pinheiro et al., 2021). Involving staff in research is very important, given that their practices are critical to young people's recovery, and these practices are influenced by their beliefs and representations (Calheiros et al., 2011). Staff practices such as being empathic and providing emotional and tangible support seem to foster quality relationships with young people (Pinheiro et al., 2022). For this reason, the present study aimed to provide an insightful and innovative understanding of how care workers in residential care portray adolescents' resilience.

This study was based on generalist residential care facilities aimed at addressing the psychological and basic needs of young people who were placed in residential care for protective reasons. In Portugal, as opposed to many European countries, residential care is the most common form of out-of-home care to protect children and adolescents who have been removed from their family environment (96.4%, Social Welfare Institute (ISS), 2023). The most recent statistics on young people in out-of-home care in Portugal reveal that 6347 children and adolescents were placed in residential care in 2022, of whom 84.1% (n=5344) were placed in generalist residential care facilities and the others in specialized ones (e.g., 122 young people in therapeutic residential care and 164 young people in residential care facilities to foster their autonomy). Most of these young people in residential care are male (52%), adolescents (ages ranged 12-17; 51%), and around 30% show behavioral problems (ISS, 2023). Considering the complex needs of young people in residential care, these settings must be able to provide quality services and practices that enable them to recover adaptively (Calheiros et al., 2011; Pinheiro et al., 2022). To achieve this therapeutic milieu in residential care, staff skills and practices are crucial, and for that reason gathering their perspectives and experiences is needed. In this study, a qualitative approach was selected to identify care workers' perspectives on the protective factors associated with positive adaptation for adolescents living in Portuguese residential settings and anchored on a post-positivist paradigm of qualitative research (Creswell, 2007; Guba & Lincoln, 1994).

Method

Participants

A sample of 15 female care workers from three residential care facilities participated in this study (age range 23-51 years old; *M* = 35.47, *SD* = 8.06). These three facilities only have female care workers in their teams, and for that reason our sample did not include male participants. Most participants were married (53.3%), had completed a bachelor's degree (66.7%) and 33.3% had completed a master's degree. Concerning care workers' role in residential care settings, 86.7% were caseworkers (i.e. psychologists, social workers, etc.), and 13.3% were team directors. The working time spent in residential care ranged from 1 to 14 years (*M* = 5.73; *SD* = 4.62). Considering the residential care settings, all participants worked in mixed settings (i.e., including both girls and boys), hosting between 17 and 42 young people during the data collection moment.

Measures

Sociodemographic questionnaire

Care workers completed a sociodemographic questionnaire that included a set of questions regarding personal and professional information, such as sex, age, marital status, education, role in residential care, time in service, type of residential setting, and the number of young people placed in the current residential setting.

Semi-structured interview

Grounded in the *Resilience Portfolio Model* (Grych et al., 2015), a semi-structured interview script was developed (see Table 3S for more information in appendices section) that contained four thematic sessions: (1) introduction, (2) factors explaining resilient trajectories of adolescents in the general population, (3) factors explaining resilient trajectories of adolescents in residential care, and (4) conclusions. The first thematic section aimed to identify care workers' perspectives on the concept of resilience and positive outcomes (e.g., "*If you were asked to explain what the concept of resilience is, what would you say?", "How do we perceive that a young person who has experienced negative events is still doing well/is resilient?"*). To identify the similarities and specificities of resilient factors in and out-of-care, the second thematic section aimed to identify care workers' perspectives on protective factors for the positive adaptation and resilience of adolescents in the general population (e.g., "*When you think about a resilient young person, what do you think has contributed to his/her resilience?"*),

followed by a third section that focused on protective factors for adolescents in residential care (e.g., "*When you think about a resilient young person in residential care, what do you think has contributed to his/her resilience?"*). Finally, professionals were asked to identify which factors were the most meaningful for adolescents' mental health outcomes in residential care (e.g., "*Regarding the factors you identified earlier, which are the most determinant factors for adolescents in residential care?"*). The interview was concluded by presenting a debriefing and addressing any questions or comments that might have arisen from the care workers. In the current study, for parsimonious reasons, we are focused only on the findings obtained from the first, third and fourth sections of this semi-structured interview.

Procedures of data collection and analysis

This study was approved by the Ethical Committee of the researchers' university (Ref: 105/2021). Following this approval, participants were selected using a convenience sampling approach from three Portuguese residential care facilities (i.e., generalists' residential care settings which are non-therapeutic care or juvenile corrective settings). Formal invitations, by e-mail, were sent to the selected residential care settings to invite them to participate in the study. Before data collection, the first author virtually met with the directors (using the Zoom app) to explain the main objectives of the study and the inclusion criteria of participants: a) care workers in residential care (caseworkers and directors), and b) who understood Portuguese.

Care workers were informed about the study's conditions (objectives, duration, and audio recordings) and ethical issues, such as the voluntary nature of their participation, the right to interrupt at any moment, and data confidentiality, which means that their identity would not be disclosed when transcribed, analyzed, and reported. Additionally, the participants were informed that the audio file will be deleted after the content has been transcribed. After reading the informed consent form, the participants stated that they understood all the information and agreed to participate. The first author conducted individual interviews in the participants' language (i.e. Portuguese) in each residential setting. First, participants responded to a sociodemographic questionnaire. Then, the semi-structured interview was conducted, and the same structure and sequence of the questions were followed. Data were collected between March 2022 and June 2022. The duration of the interviews ranged from 11 to 48 minutes.

Data analysis was conducted using *IBM SPSS software* (version 28) to describe the participants' socio-demographic characteristics. The content analysis approach (Elo & Kyngas, 2008) was conducted using *MAXQDA software* (version 22) to analyze qualitative data and

coding categories. More specifically, the data analysis process involved (1) *Preparation* (i.e., knowing the data, selecting the unit of analysis, and deciding on the analysis process), (2) *Organizing* (i.e., macro-categories, categories, and subcategories were created, which were associated with a description), and (3) *Reporting* (i.e., report the analysis process and the findings through the conceptual map, categories, or storyline). A mixed-analytic approach was adopted to code the material. To identify and organize the categories, an inductive codification was first applied, followed by a top-down strategy based on the theoretical framework. The coding categories were created to address the research aims, specifically consider the content from the different sections of our interview, as these sections provided context for qualitative content. Furthermore, data were gathered and reported taking into consideration the thirty-two-item checklist of COREQ, which was created for reporting qualitative research (i.e., interviews or focus group; Tong et al., 2007) in terms of three domains: (1) research team and reflexivity, (2) study design, and (3) data analysis and reporting (see Table 4S for more information in the appendices section).

Following our epistemological position and paradigm, we aimed to access the participants' perspectives and their meanings as accurately as possible, with the researchers' interference being minimized. To do this, data collection was based on a semi-structured interview and data analysis included a co-codification of a percentage of all material, and frequencies of coded data were quantified and reported. A thorough discussion of all the categories among the three researchers, the use of relevant examples from the accounts of care workers, and the independent researcher's co-coding of 30% of the data all served to ensure the validity and reliability of the coding categories that emerged. The *Cohen Kappa* coefficient was used to assess inter-coding agreement (Landis & Koch, 1977) and a perfect agreement was obtained (Kappa=0.963). The meaning units deemed to be particularly illustrative for each category were chosen, along with quotes from participant remarks that were coded for qualitative analysis. The number of care workers who reported the category (*n*) and the frequency of meaning units for each category (*f*) were used to depict the results.

Results

Data analysis resulted in six macro categories, thirty-two categories, and thirty-two subcategories. All these categories are listed in Table 13, but for parsimony reasons, we will merely detail the most prevalent categories (i.e. reported by more than three participants) in the text.

Resilience conceptualization and resilience outcomes

When the *Resilience concept* was explored, seven categories were identified. Most of our participants defined resilience as the capacity to *Overcome* difficult situations (e.g., "I would say that resilience involves the ability to overcome difficult situations"; P1, 26 years), followed by the capacity to *Cope with problems* (e.g., "I would say that it is the ability of any individual to solve problems"; P6, 36 years), and *Post-traumatic growth,* suggesting individuals' personal growth after a life crisis or traumatic event (e.g., "It is the ability we have to take our mental organization, after a situation or stress, trauma"; P5, 48 years).

Regarding the *Resilience outcomes four* categories were identified in the current study: *Competence, Psychological well-being, Emotional and behavioral adaptation, and Sense of belonging.* Specifically, our participants suggested that *Competence* involves different sides of capabilities, such as *Academic competence* (e.g., "For example from the school part, right? If you are a kid who, despite difficult situations, manages to maintain a positive school career, manages to present satisfactory results, I think this is one of the factors in which he shows a little bit of that resilience."; P3; 40 years), *Social competence* (e.g., "When they manage to create interactions outside the home context when friends are no longer just those who live in residential care and who have common stories. When they manage to bond with the community"; P14, 40 years) and the capacity to *Moving forward* (e.g., "That they manage to move forward, sometimes the families end up not living up to expectations and, therefore, it leaves them frustrated, but when they manage to move forward, it is noticeable that they are being resilient"*;* P13; 38 years).

In terms of *Psychological well-being*, our participants considered that it includes *Positive meaning-making,* which means that individuals interpret situations and make sense of life events in an adaptative way (e.g., "As I usually say to my colleague, so many bad things happened to him and when he tells his story and it's not an escape, it's not a denial, he turns what was bad into good"; P5, 48 years), and having a *Purpose in life,* which means the adolescents' ability to guide their life and shape their goals (e.g., "When we find an adolescent who has well-defined life goals, personal goals, whether professionally or socially"; P15*,* 23 years). Finally, *The Emotional and behavioral adaptation* category includes being able to show a *Positive adaptation* to the new reality or context in general (e.g., "Everyone arrives here with a lot of baggage and, therefore, I think that when their path here proves to be favorable and they are adapting"*;* P13*,* 38 years).

Care workers' perspectives about protective factors for adolescents in residential care

When the protective factors for resilient trajectories of adolescents in residential care were explored, three macro categories emerged: *Out-of-care contexts, Residential care context, and Young people's variables* (Table 1).

The macro category *Out-of-care contexts* (OFC) includes three categories: *Support in OFC, Type of support provided in OFC,* and *Participation in extracurricular activities*. Specifically, the sources of *Support in OFC* highlighted by our participants were *Family support* (e.g., "The family has a huge impact on these kids"; P2, 27 years), *School support,* from teachers or peers (e.g., "The school environment and school itself, and the school community from teachers to staff and peers"; P3, 40 years), *Community support* (e.g., "I think that we also have partners who are volunteers (…) and the fact that we often provide our young people with volunteering in the community, the community itself, that is, to also meet other people, other young people and the surrounding area"; P9, 31 years) and *Peers support in OFC* (e.g., "I also think it is very important to be part of a peer group"; P12, 40 years).

Regarding the *Type of support provided in OFC*, care workers pointed out the relevance of *Emotional support in OFC,* including getting attention, affect, and love from significant others (e.g., "And I think it has a lot to do with love, of affection because they were separated. That's why it's essential"; P2, 27 years), following the *Instrumental support in OFC,* which means getting information and orientation (e.g., "The monitoring of teachers more suited to the curriculum of each young person"; P1, 26 years). Finally, care workers suggested that *Participation in extracurricular activities* might enable young people in residential care to achieve resilience outcomes (e.g., "It is very important that they can participate in extracurricular activities"; P13; 38 years).

The macro category *Residential care context* included six categories: *Type of support provided in residential care, Staff characteristics and behaviors in residential care, Support in residential care, Ecological interventions, Residential care resources, and Frequent contact with relatives.* Specifically, our participants reported that the *Emotional support* provided by staff and peers in residential care (e.g., "I think that what can provide a good adaptation here is the close relationship that one can have both with the adults in the group home and with peers"; P9; 31 years), and the *Instrumental support* in residential care, through help to establish routines and limits (e.g., "Having important rules and we always say that rules are very important for us to live in society. We may not agree 100% with them, but we must do them and that's very

important to them. Realize that there is a routine"; P15; 23 years) are the most relevant types of support in residential care to foster young people's resilience. Moreover, our participants considered that the *Support in residential care* is provided by *Staff* (e.g., "Caregivers or care workers"; P4, 37 years), and by *Peers* (e.g., "The peer's group because I think that in the age groups that we receive, those of age is a reference"; P14; 40 years).

Staff characteristics and behaviors in residential care were also recognized by care workers as protective factors for adolescents' resilience in residential care. This category emphasizes the staff's skills (e.g., being helpful, empathic, available, and responsive) and practices (e.g., meeting emotional and tangible needs) (e.g., "But for me, it's really the ... oh the empathy also helps a lot. Be empathetic with the adolescent and talk about everything he wants to talk about"; P6, 36 years) as a protective factor for resilience. Furthermore, a collaborative approach between different stakeholders from various developmental contexts (i.e., family, school, residential care, community) was highlighted by our participants as a resilience resource – *Ecological interventions* (e.g., "I think that the relation between all the elements, between the group home and family, group home and school, group home and sports, group home and cultural activities, whatever it may be, there has to be a lot of communication and a lot of involvement from both parts and we have to analyze the objective for the same, it is not each paddling for their path"; P6, 36 years).

In addition, a set of *Resources* from the residential care context were identified, such as its structure and dynamics (e.g., "I think that the structure of the residential care setting itself, the physical and dynamic structure of the home can also have an impact on how they will deal with the issues that arise later"; P12, 40 years) as well as the *Frequent contact with relatives,* which means that the maintenance of contacts between adolescents and their birth family or other relatives is particularly protective to a resilient trajectory in residential care (e.g., "When the family is present, that they are interested, that they want to come and be with them, that they are concerned, that they call the care workers team to find out how they are doing, that they call the caregivers team in principle, these children are able to have stability at an emotional level and more assertive behavior here, in short, more positive"; P13, 38 years).

Moreover, *Young people's variables in residential care* included four categories: *Personal assets, Coping, Life experiences, and Knowledge of the process in residential car*e. From the perspective of our participants, *Personality* such as traits, behaviors, and patterns of thinking (e.g., curiosity, responsibility, optimism, adaptability) (e.g., "How themselves adapt to the residential care. They adapt to the routines of the home, to the rules that are imposed, that's it.

I think these are also important factors"; P12, 40 years), *Self-qualities* (e.g., self-confidence, self-efficacy, self-esteem) (e.g., "But I think confidence in themselves. Despite all the history whatever it may be, all the process they have, trusting themselves is important"; P6, 36 years), and *Social skills* (e.g., communication skills, cooperation) (e.g., "I think that being sincere when you have a problem is also being able to verbalize it. And the ability to communicate too, being able to verbalize to the other what is going on"; P6, 36 years), were highlighted as fostering their resilience.

Finally, *Coping* strategies such as *Help-seeking* (e.g., "If adolescent seeks help from an adult on time, because he can't really manage that problem, he doesn't really know what to do… I think it's adaptive"; P6, 36 years), or *Meaning making* their life experiences (e.g., "I think that those who are capable of looking at residential care as an opportunity"; P7, 51 years), were emphasized. Previous *Life experiences* improve the adolescents' abilities to deal with other situations and knowledge about the world (e.g., "I think what makes him resilient is that he has been through so many situations, experiences and that he opens his world beyond the world where he lived and that makes the more knowledge the more power, the more possibility they have to resist"; P11, 37 years) were perceived as associated with the resilience of adolescents in residential care.

Meaningful factors of resilience

When asked about the meaningful factors of resilience for adolescents in residential care, care workers proposed that the *Young people's variables* (e.g., "I think they are their own. I think it is the work done directly with them on a psychological level. The characteristics they have and what can be worked on in this aspect"; P4, 37 years), *Ecological interventions* (e.g., "The most important factor, hm... Maybe the system's proximity to families and young people. When I say the approach of the system, I am including the judge who decides and makes that decision, as well as the professionals who decide to remove the child from the family. Close"; P11, 37 years), and factors related with young people's *Family* (e.g., "I think without any doubt the family"; P10, 32 years) are particularly significant to foster adolescents' resilience in residential care.

Table 13

Macro categories, categories, and subcategories about resilience concept and protective factors of adolescents' psychological health, through the lens of care workers in residential care

Macro Category	Category	Subcategory
Resilience concept	Overcome (*n*=9; *f*=10)	
	Cope with the problems (*n*=6; *f*=6)	
	Post-traumatic Growth (*n*=4; *f*=4)	
	Adaptation (*n*=3; *f*=3)	
	Acceptance (*n*=2; *f*=2)	
	Don't give up (*n*=2; *f*=2)	
	Persistence (*n*=2; *f*=2)	
Resilience outcomes	Competence (*n*=13; *f*=29)	Academic competence (*n*=9; *f*=9)
		Social competence (*n*=6; *f*=11)
		Moving forward (*n*=5; *f*=5)
		Self-regulation (*n*=2; *f*=2)
		Confidence (*n*=1; *f*=1)
		Readiness (*n*=1; *f*=1)
	Psychological well-being (*n*=7; *f*=11)	Positive meaning-making (*n*=4; *f*=5)
		Purpose in life (*n*=4; *f*=4)
		Autonomy (*n*=1; *f*=1)
		Self-acceptance (*n*=1; *f*=1)
	Emotional and behavioral adaptation (*n*=5; *f*=6)	Adaptative behavior (*n*=2; *f*=2)
		Positive adaptation (*n*=3; *f*=4)
	Sense of belonging (*n*=1; *f*=1)	

Out-of-care contexts	Support in OFC (*n*=15; *f*=62)	Family (*n*=14; *f*=24) School (*n*=14; *f*=22) Community (*n*=7; *f*=9) Peers OFC (*n*=5; *f*=7)
	Type of support provided in OFC (*n*=14; *f*=56)	Emotional support in OFC (*n*=14; *f*=39) Instrumental support in OFC (*n*=8; *f*=17)
	Participation in extracurricular activities (*n*=10; *f*=16)	
Residential care context	Type of support provided (*n*=14; *f*=94)	Emotional support in residential care (*n*=14; *f*=60) Instrumental support in residential care (*n*=10; *f*=34)
	Staff characteristics and behaviors (*n*=13; *f*=79)	
	Support in residential care (*n*=12; *f*=25)	Staff support (*n*=10; *f*=12) Peers support (*n*=8; *f*=13)
	Ecological intervention (*n*=11; *f*=30)	
	Residential care resources (*n*=9; *f*=17)	
	Frequent contact with relatives (*n*=8; *f*=14)	
Young people's variables	Personal assets (*n*=12; *f*=78)	Personality (*n*=12; *f*=35) Self-qualities (*n*=8; *f*=18) Social skills (*n*=6; *f*=13) Motivation (*n*=3; *f*=7) Self-regulation skills (*n*=3; *f*=5)
	Coping (*n*=5; *f*=10)	Help-seeking (*n*=2; *f*=4) Meaning making (*n*=2; *f*=3) Active problem solving (*n*=1; *f*=1) Focus on schools' tasks (*n*=1; *f*=1) Humor (*n*=1; *f*=1)
	Life experiences (*n*=4; *f*=4)	
	Knowledge about the process in residential care (*n*=2; *f*=2)	

Meaningful factors of resilience	Young people's variables (*n*=7; *f*=8) Ecological interventions (*n*=6; *f*=9) Family (*n*=6; *f*=7) Community (*n*=3; *f*=3) Extra-curricular activities (*n*=1; *f*=1) Peers (*n*=1; *f*=1) Residential care context (*n*=1; *f*=1) School (*n*=1; *f*=1)

Discussion

This study aimed to explore care workers' perspectives on the protective factors associated with resilience of adolescents in residential care. Therefore, a qualitative approach was adopted to address how care workers portrayed adolescents' resilience in residential care. To our knowledge, this is the first qualitative study guided by the *Resilience Portfolio Model* (Grych et al., 2015) that focused on care workers' perspectives in care.

Regarding the concept of resilience, care workers defined it mostly as the ability to overcome difficult situations in life. This means that resilience occurs only in the face of adversity, and protective factors allow people to rebound from adversity, which is critical to overcome and show healthy functioning (Hamby et al., 2018). Moreover, care workers pointed out that psychological health as an outcome (i.e., competence, psychological well-being, emotional and behavioral adaptation, and a sense of belonging) involve more than the mere absence of psychopathology, as it also includes well-being and competence. This finding suggests that healthy functioning, after exposure to adversity, is better conceptualized as a multi-dimensional concept (Grych et al., 2015), including both the presence of positive indicators of mental health and the absence of negative ones (Magalhães & Calheiros, 2017). Nevertheless, the literature on victims of violence (and specifically, including young people in residential care) has explored resilience mostly as the absence of psychopathology, overlooking a more comprehensive approach that also includes the well-being side of health (Hamby et al., 2018; Magalhães & Calheiros, 2017; Pinheiro et al., 2021).

Concerning protective factors, care workers proposed a set of protective factors at different levels (e.g., supportive relationships in and out-of-care; personal assets and coping strategies) suggesting that supportive relationships are particularly important for the adolescents in residential care. Supportive relationships have been widely acknowledged as a protective factor for healthy functioning given that they provide a secure relational context that might foster individuals' emotional security and regulatory strengths (Mota & Matos, 2014; Riley, 2011). Moreover, supportive relationships may buffer the negative consequences of traumatic events (e.g., abuse and/or neglect) (Cohen & Wills, 1985; Lakey & Cohen, 2000), which is particularly critical for adolescents in residential care (Magalhães et al., 2021). Considering these adolescents' previous history of trauma and insecure relationships with primary caregivers (Indias et al., 2019), supportive relationships in residential care might provide a critical therapeutic relational environment, including safer and more stable significant relationships

(Izzo et al., 2020; Mota & Matos, 2014). In fact, staff skills (e.g., being helpful, and empathic) and supportive practices (e.g., meeting emotional and tangible needs) in residential care might foster positive adaptation and lower psychopathology (e.g., Aguilar-Vafaie et al., 2011; 2014; Erol et al., 2010; Maurovic et al., 2014) by smoothing adolescents' self-efficacy, and self-regulation (Riley, 2011). Thus, a *therapeutic milieu* that provides supportive relationships is critical, which calls for training and supervision of professionals in residential care to ensure that skilled staff (e.g., empathic, responsive) work in these contexts (Gonzalez-Mendez et al., 2021; Magalhães et al., 2023; Pinheiro et al., 2022).

Furthermore, delivering ecological interventions in care and collaborative interventions involving diverse services and professionals in the child-care system together with birth families were perceived by our participants as a resilience resource. Systemic, collaborative and ecological interventions (Bronfenbrenner & Morris, 2006) may provide greater strengths to the resilience portfolio of adolescents in residential care, including the benefits of the cumulative protective role of quality relationships with significant others in different micro-systems (i.e., family, school, residential care setting, the community). The cumulative protective role of quality relationships with significant others in different micro-systems might be enhanced and fostered in residential care given that adolescents living in this alternative care context have experienced significant life changes (e.g., home, school, or other residential care facilities) or critical separations and losses (e.g., family, peers at school) (Calheiros & Patrício, 2014; Magalhães & Calheiros, 2017). As such, an ecological and collaborative approach might enhance the success of child welfare intervention, namely, a well-succeeded family reunification or the transition to independent living. Ecological interventions not only ensure stable and secure relationships in residential care, but also implement family-oriented practices that strengthen, whenever possible, the relationship between adolescents and their birth family (e.g., parents, siblings, or extended family members) (Geurts et al., 2012). In fact, the adolescents' psychological health in care may be positively affected by regular contact with their birth families (Attar-Schwartz & Fridman-Teutsch, 2018), particularly when family reunification is planned. Also, these adolescents may benefit from the protective role of a quality relationship with teachers at school (Kirk & Day, 2011; Rhodes et al., 2006) or with significant others in the community (e.g., peers) through involvement in extra-curricular activities. Specifically, participation in extra-curricular activities is associated with lower mental distress and greater emotional well-being (Caserta et al., 2016), particularly for adolescents who are exposed to traumatic experiences (Grych et al., 2015). Thus, adolescents'

involvement in the community (e.g., through participation in extra-curricular activities) would be guaranteed to provide greater young people empowerment that might facilitate their transition from care to an independent life.

Nevertheless, to implement ecological interventions, a set of residential care resources is needed. Specifically, young people's complex needs should be met by appropriate resources and residential care services (Calheiros et al., 2011; Rodrigues et al., 2013), such as adequate ratios of children to professionals and/or lower staff turnover (Moore et al., 2018). Preventing staff turnover and lowering the ratio of adolescents to professionals is important for fostering adolescents' resilience. For instance, in Portugal, we have been witnessing an effort to organize residential care settings into smaller group homes to foster more family-like environments and closer adolescent-professional relationships (Law no. 450/2023). However, further efforts are needed to provide the necessary resources to these contexts to be able to implement these legal requirements. As such, selecting and recruiting qualified human resources with stable labor conditions is particularly important (Magalhães et al., 2021; Pinheiro et al., 2022; Quiroga & Hamilton-Giachritsis, 2016) and may be prioritized in the child protection policies. These organizational factors might facilitate the quality of relationships in residential care, which in turn influences adolescents' positive outcomes and resilience (Pinheiro et al., 2022). Residential care contexts full of resources might provide better conditions for empowering adolescents, through the protective role of supportive relationships with the staff (Rabley et al., 2014). In sum, care workers seem to acknowledge the value of ecologically oriented approaches in residential care, together with the individual characteristics of adolescents, which might facilitate resilient trajectories in care.

Finally, care workers revealed that having a greater repertoire of personal assets (e.g., personality, self-qualities, communication skills) and adaptive coping strategies (e.g., help seeking behaviors, meaning-making strategies) might be particularly useful for helping adolescents in residential care to thrive with adversity. Personal assets such as personality traits, self-regulation and social skills of adolescents in residential care were suggested by professionals as important protective factors in their resilience portfolio. These unique personal attributes might be important precursors of adaptation in that they seem to predispose adolescents to adapt to the diverse challenges in their lives (e.g., rules and routines in care, placement challenges; Luksík, 2018), as well as to establish positive and quality relationships in care (Pinheiro et al., 2022), which in turn might positively impact their psychological health. In addition to these personal assets, coping strategies, such as help-seeking coping and

meaning-making, were highlighted by our participants in this study as particularly protective of resilience in residential care. Adolescents' ability to seek support might provide them with the necessary help to manage daily stress and problems or regulate emotional difficulties (Hiller et al., 2020). Furthermore, meaning-making strategies enable adolescents to assign significance and purpose to their lives when faced with stressful situations (Grych et al., 2015). These coping strategies may be perceived by our participants as particularly important for young people in residential care, given that adolescents in care have greater previous adverse and stressful events they need to deal with. Thus, interventions in residential care might provide opportunities for these adolescents to become more able to implement active and problem-solving coping strategies (Arslan, 2017) and to achieve self-regulation skills, which are both important for reducing psychopathology and enhancing well-being (Nourian et al., 2016; Magalhães et al., 2021; Maurovic et al., 2014; Segura et al., 2017).

Despite these innovative contributions, this study had some limitations. The present study only included female care workers; therefore, future studies might benefit from the inclusion of more gender-balanced samples, if further residential care setting could be included. Moreover, this study was based on a convenience sample of professionals from three generalist residential care settings. Further studies should include the perspectives of professionals from therapeutic residential care settings, enabling the identification of factors that could be protective in contexts that address complex young people's mental health needs. Furthermore, this study included residential care directors (who are responsible for the teams' coordination and management adolescents' case plan) and case managers (who are only responsible for the adolescents' case plan management), but not caregivers. Caregivers are the frontline staff, and their perspectives are also critical to foster resilience in residential care.

Conclusion

This study expands the literature on adolescents' resilience in residential care by providing new theoretically insights from staff perspectives. Overall, the results shows that resilience in care stems from the interplay between personal assets, coping, supportive relationships and ecological interventions. Particularly, this study shed light on the critical role of the interplay between family, schools and residential care settings to provide supportive relationships who might strengthen adolescents' resilience outcomes. Therefore, adolescents in residential care may have a unique resilience portfolio that enables their healthy functioning, both in terms of low symptoms and high levels of well-being and competence (Grych et al., 2015).

CHAPTER VII

Understanding Protective Factors to Adolescents' Resilience in Residential Care

This study is currently under review

Pinheiro, M., Magalhães, E., & Baptista, J. (under review). Understanding Protective Factors to Adolescents' Resilience in Residential Care. *Current Psychology*

Abstract

Research on youth mental health in residential care has mostly overlooked the identification of protective factors and positive adaptation, as it has been mainly focused on risk factors and psychopathology. Through the lens of the Dual-factor Model of Mental Health and the Resilience Portfolio Model, this study aimed to identify whether diverse protective factors (resources, assets, and coping) are associated with different profiles of mental health. A multi-informant approach (adolescents and care workers) was used, including 155 adolescents, aged 12-17 years (M = 14.89, SD = 1.58) living in 20 Portuguese non-specialized residential care settings who completed self-report measures and tasks. A Cut-Score Approach and Multivariate Analysis of Covariance (MANCOVA) were performed. The Positive Mental Health (PMH) group was the most prevalent in this study. The PMH group reported more protective factors (i.e., attachment quality relationships, control-coping strategies, and certainty mentalization) than the other groups (i.e., Symptomatic but Content (SBC), Vulnerable, and Troubled). The SBC group reported more control coping strategies, while the PMH and Vulnerable groups reported more certainty mentalization than the other groups. These findings may inform the design of residential care services and interventions targeting different mental health needs.

Keywords

Adolescents, Resilience, Mental health, Protective factors, Residential care

Introduction

Research on youth mental health in residential care has mostly overlooked the role of protective factors and positive adaptation (e.g., well-being). In contrast, risk factors and unfavorable outcomes such as psychopathology have mostly been explored in the literature (Hobbs et al., 2021; Pinheiro et al., 2021; Sulimani-Aidan & Melkman, 2024). Youth in residential care often enter in care due to maltreatment and neglect; however, despite this adversity history, they might exhibit positive adaptation (i.e., low symptoms and high well-being and competence; Lou et al., 2018; Pinheiro et al., 2021). It is particularly important to investigate mental health in these contexts beyond the conventional paradigm that merely considers psychopathology (Magalhães & Calheiros, 2017) to inform the design of services and interventions targeting different mental health needs. Additionally, identifying protective factors associated with resilient outcomes of adolescents in these settings may inform policymaking and enable best practices that improve adolescents' psychological health in residential care (Pinheiro et al., 2021). Residential care providers may be better equipped to create and carry out psychosocial interventions tailored to the specific needs of different profiles of adolescents in residential care. As such, guided by both the Dual Factor Model of Mental Health (Antaramian et al., 2010) and the Resilience Portfolio Model (Grych et al., 2015), the present study examined whether there are protective factors that may distinguish adolescents in residential care who exhibit different profiles of mental health (i.e., crossing psychopathology and well-being scores).

Dual Factor Model of Mental Health and Resilience Portfolio Model

The Dual Factor Model of Mental Health argues that mental health involves more than the mere absence of psychopathology, which means that both psychopathology and well-being should be considered when conceptualizing mental health outcomes (Antaramian et al., 2010; Magalhães, 2024). Combining both psychopathology and well-being may provide a more in-depth snapshot of the mental health than the traditional one-dimensional model (Magalhães, 2024). As such, when crossing well-being and symptoms, four mental health statuses might emerge: (1) Positive Mental Health Group (PMH; high well-being and low psychopathology); (2) Vulnerable (low well-being and low psychopathology); (3) Symptomatic but Content (SBC; high well-being and high psychopathology), and (4) Troubled (low well-being and high psychopathology) (Antaramian et al., 2010; Magalhães & Calheiros, 2017; Magalhães, 2024). The PMH group is the most common profile according to most studies guided by this model showing the best outcomes in terms of well-being (e.g., life satisfaction, personal growth, and purpose in life)

and low psychopathology (e.g., fewer internalizing and externalizing symptoms) (Magalhães, 2024). Furthermore, adolescents in these four groups may differ significantly in their outcomes (e.g., Antaramian et al., 2010; Arslan & Allen, 2020; Magalhães & Calheiros, 2017). In a study of 764 middle school students, Antaramian and colleagues (2010) showed that the SBC group (i.e., high well-being and high psychopathology) reported more positive attitudes towards teachers, motivation, and goal valuation than the Vulnerable group (i.e., low well-being and low psychopathology). Furthermore, students in Vulnerable and Troubled groups (e.g., similar scores of well-being, and different scores of psychopathology) report similar academic and social outcomes. Likewise, Arslan and Allan (2020) show that the PMH report higher positive school outcomes (e.g., felt more connected to school, positive attitudes towards teachers, motivation) than peers in other groups (i.e., SBC, Vulnerable and Troubled groups).

Studies guided by the Dual Factor Model of Mental Health have focused mainly on school adjustment (Magalhães, 2024), and only a few studies have empirically investigated this model among young people in residential care (Magalhães & Calheiros, 2017). Contrarily to other studies (e.g., Antaramian, 2010), the Troubled group had the most prevalent mental health profile, with a sample of adolescents in residential care (35%), even though approximately 27% belonged to the PMH profile, 20% to the SBC profile, and 18% to the Vulnerable profile (Magalhães & Calheiros, 2017). These differences may be related to the fact that young people in residential care are considered vulnerable or at-risk populations (Magalhães & Calheiros, 2017) because of past adversity (e.g., abuse and neglect) and current (e.g., separation and loss), which consequently, results in poorer mental health outcomes (e.g., emotional and behavioral problems; Indias et al., 2019).

In addition to these distinct profiles, empirical evidence has assessed group differences across variables (e.g., internal characteristics and/or external resources) that may be associated with different developmental outcomes. Magalhães and Calheiros (2017) examined the role of both formal and informal social support for young people in residential care settings. The authors showed that groups reporting high levels of well-being (i.e., PMH and SBC) perceived greater social support than Vulnerable or Troubled groups (Magalhães & Calheiros, 2017). Furthermore, Grych and colleagues (2020) found that emotional regulation, generativity, optimism, and support from the family, teachers, and peers were the most protective factors (i.e., individual strengths and external resources) of mental health in a sample of adolescents from the Appalachian region. These authors showed that the two groups with high well-being - PMH and SBC - reported similar levels of emotional awareness, generativity, and purpose, and

that they were significantly higher than those of adolescents in other groups (i.e., Vulnerable and Troubled). As such, these individual strengths seem to be crucial for fostering well-being regardless of psychopathology. Additionally, the two groups with the lowest levels of psychopathology (i.e., PMH and Vulnerable) also reported the highest levels of emotional regulation and optimism (Grych et al., 2020). These findings suggest that individual strengths, such as emotional regulation or optimism, may be particularly important for symptom reduction regardless of well-being scores.

These findings suggest that the Dual Factor Model of Mental Health offers key insights for understanding resilience in young people exposed to adversity (Grych et al., 2020); however, it does not clarify which protective factors might operate to improve adolescents' adaptive functioning. As such, the Resilience Portfolio Model from Grych and colleagues (2015) might help us to provide insightful evidence of these protective factors. This strengths-based framework includes a multi-dimensional perspective of mental health (i.e., positive affect, competence, psychopathology, and well-being) and covers protective factors from different ecological levels, which are organized into *Assets* and *Resources. Assets* are the individual's strengths that support healthy functioning (e.g., regulatory, interpersonal, and meaning-making strengths), and *Resources* involve protective factors anchored on the individual's social ecology, such as supportive relationships by family, friends, or teachers. This model also includes a coping component defined by the strategies that individuals use to deal with stressful or violent experiences (Grych et al., 2015).

A recent review identified a set of protective factors (e.g., emotion regulation, parental support, and staff support in residential care) that are particularly important for the psychological health (i.e., including psychopathology and well-being) of adolescents in residential care (blind for review). This review suggests that young people in residential care may exhibit positive functioning and resilient outcomes in the face of such adversity (e.g., experiences of previous maltreatment) (Lou et al., 2018; blind for review), when their resilience portfolio includes specific individual and contextual protective factors (e.g., cognitive skills, empathy, problem-solving strategies, family, residential care, and community support) for psychological health (blind for review).

The current study

Despite research efforts that have been made to systematize protective factors for adolescents' mental health in residential care (blind for review), this evidence does not show whether these

protective factors are associated with different mental health statuses in residential care. No studies have been conducted with adolescents in residential care that simultaneously consider the Dual Factor Model of Mental Health (Antaramian et al., 2010) and the Resilience Portfolio Model (Grych et al., 2015). Furthermore, studies using quantitative designs, based on multi-informants (i.e., adolescents and care workers) and multi-method approaches (i.e., self-report measures and tasks) are needed in these specific developmental contexts (Pinheiro et al., 2021). To address these gaps, we aimed to examine which protective factors are associated with different mental health group profiles of adolescents in residential care. Thus, based on previous theoretical assumptions and empirical evidence (Antaramian et al., 2010; Grych et al., 2015), the following hypotheses are stated:

H1: Adolescents in residential care might exhibit different profiles of mental health (i.e., PMH, Vulnerable, SBC and Troubled).

H2: Contextual *resources* (i.e., attachment to parents, peers, and caregivers in residential care), *coping* strategies and individual *assets* (i.e., cognitive skills, executive functioning, mentalization) will be associated with PMH profile of adolescents in residential care.

Method

Participants

One hundred and fifty-five adolescents living in twenty Portuguese non-specialized residential care settings, aged from 12 to 17 years (M = 14.89, SD = 1.58), and mostly female (n=89; 57.4%) participated in this study (Table 14). Given the significant number of one participant per country and to preserve the confidentiality of our participants, these data are organized by continents. Thus, most of the adolescents that participated in this study are from Europe with most Portuguese youths (83.9%), 7.6% from Africa, 3.9% from the South of America, and 0.6% from Asia. Most of the adolescents were in the 9th grade (27.1%). Most (75%; n=117) had two or more adverse experiences and were mostly neglected (40%; n=62). Considering the overall time since they entered the care system, 61 adolescents had been in residential care setting for more than 24 months (39.5%) and 52 adolescents for less than 12 months (33.2%). On average, they were in care for 31 months (ranging from one month to 140 months; SD=28.6). Regarding the adolescents' case plans, to 39% (n=60) of them, the intervention involved family reunification (in their nuclear family), followed by remaining in the current residential care setting (37%; n=58). Data were collected in 20 non-specialized residential care settings, which vary significantly in their dimensions (i.e., larger homes hosting 45 young people, but also smaller units with 8 young people) and in terms of young people's age (i.e., 4 months to 24

years). Most of these settings were mixed (50%, n=10) (i.e., including both girls and boys); 30% (n=6) received only boys, and 20% (n=4) received only girls.

Table 14

Descriptive statistics of adolescents' sociodemographic characteristics

Variable	N (%)
Gender	
Female	89 (57.4%)
Male	66 (42.6%)
Continent of Origin	
Europe (France, Moldova, Portugal, Ukraine, Romania, Russia)	136 (87.6%)
Africa (Angola, Cape Verde, Guinea, Malawi, Mozambique, San Tomé)	12 (7.6%)
South America (Brazil)	6 (3.9%)
Asia	1 (0.6%)
Educational level	
9th grade	42 (27.1%)
8th grade	35 (22.6%)
7th grade	31 (20%)
10th grade	15 (9.7%)
11th grade	11 (7.1%)
6th grade	10 (6.5%)
5th grade	5 (3.2%)
12th grade	3 (1.9%)
Alternative curricular paths	2 (1.3%)
Education and training courses	1 (0.6%)
Reasons for entering in the system	
Neglected	62 (40%)
Exposed to behaviors that affected their safety or emotional stability	53 (34.2%)
Engaged in behaviors that affect their health, safety, and development	47 (30.9%)
Physically abused	36 (23.2%)
Abandoned or left to oneself	30 (14.9%)
Psychologically abused	30 (14.9%)
Sexually abused	7 (4.5%)
Overall time since they entered the care system	
Until 12 months	52 (33.2%)
13-24 months	42 (27.3%)
> 24 months	61 (39.5%)

Adolescents' case plans	
Family reunification (in their nuclear family)	60 (39%)
Remaining in the current residential care setting	58 (37%)
Autonomy/independent life preparation	29 (19%)
Family reunification (in the extended family)	6 (4%)
Transfer to another residential care setting	1 (0.6%)
Adoption	1 (0.6%)

Measures

To provide a better understanding of the correspondence between the measures, variables, informants, and theoretical domains assessed in this study, this information is provided in Table 15.

Table 15

Measures, variables and domains from the Resilience Portfolio Model Measures, variables and domains from the Resilience Portfolio Model

Informant	Domains from the Resilience Portfolio Model	Variable	Measure
Adolescent	Resources	Attachment	The Inventory of Parent, Peers, and Teacher Attachment
	Coping Behavior	Coping	The short version of the Toulousiana Coping Scale
	Assets	Mentalization	The Reflective Functioning Questionnaire
		Cognitive Ability	The Raven's Standard Progressive Matrices
		Executive Functioning	The Wisconsin Card Sorting Test
	Psychological Health	Well-being	The Satisfaction with Life Scale
		Psychopathology	The Strengths and Difficulties Questionnaire
	Exposure to Violence	Victimization	The Juvenile Victimization Questionnaire
Care workers		Child Abuse and Neglect – previous the placement in residential care	The Child Maltreatment Severity Questionnaire

Instruments filled out by adolescents

Sociodemographic Questionnaire

A sociodemographic questionnaire was filled out by the adolescents, focusing on their age, gender, nationality, and educational year.

Inventory of Parent, Peers and Teacher Attachment

The Inventory of Parent, Peers, and Teacher Attachment (IPPA-R) (Armsden & Greenberg, 1987, Portuguese version of Figueiredo & Machado, 2010) aims to assess how adolescents perceive attachment to meaningful figures. In this study, the versions of Parents, Peers and Teacher Attachment (adapted to caregivers in residential care) were used and the score of each inventory was calculated. Each inventory comprises 25 items organized into three subscales: *Communication and Affective Proximity (e.g.,* "*My parents respect my feelings*"*)*, *Mutual Acceptance and Understanding (e.g., "I think my parents are good parents")*, and *Retreat and Rejection (e.g., "It is not worth showing my feelings to my parents*"*)* (Figueiredo & Machado, 2010). Although the three inventories (parents, peers, and teachers) contain the same dimensions, the items in each dimension are not always the same. The total score of attachment to the meaningful figures may be obtained through the sum of the scores of all scales, except for the Retreat and Rejection scale, which should not be included. Participants answered these items using a five-points *Likert* scale from "Always true" to "Never true". For parsimony reasons, in the current study we used the total score of the three inventories (parents, peers, and teachers) in the data analyses.

Regarding the Inventory of Parent Attachment, the internal reliability of the total attachment score for parents in the original version was α=.82 (Figueiredo & Machado, 2010) and in the current study the internal reliability was α=.95. In terms of Peer Attachment, the internal reliability of the total attachment score in the original version was α=.90 (Figueiredo & Machado, 2010) and in the current study, the internal reliability was α=.93. Finally, the Inventory of Teacher Attachment was adapted in this study to caregivers in residential care. The internal reliability of the total attachment score to teachers in the original version was α=.86 (Figueiredo & Machado, 2010) and in the current study the internal reliability was α=.94.

Toulousiana Coping Scale - short version

The short version of the Toulousiana Coping Scale (ETC-R; Nunes et al., 2014) assesses the common coping strategies adopted by individuals to deal with stressful events. It consists of 18 items organized in five dimensions: 1) Control (5 items, e.g., "*Analyze the situation to better understand it"*, α = .80); 2) Refusal (4 items, e.g., "*I tell myself that this problem isn't important",* α = .67); 3) Conversion (3 items, e.g., "*I change the way I live"*, α = .66); 4) Social Support (3 items, e.g., "*I feel that I need to share with those close to me, what I'm feel"*, α = .64); 5) Distraction (3 items, e.g*., "I work in cooperation with others for forget myself"*, α = .59) (Nunes et al., 2014). The items were answered on a five-point *Likert* scale (1 - "never" to 5 - "always"). The reliability evidence obtained in the current study was acceptable for three of the subscales (i.e., considering the cut off of 0.60, cf. Mohamad et al., 2015): Control (α = .73), Refusal (α = .63; after removing the item 11) and Conversion (α = .64). However, the other two dimensions had very low reliability values and were, therefore, not included in the statistical analyses (Social Support α = .53; Distraction α = .59).

Reflective Functioning Questionnaire

The Reflective Functioning Questionnaire (RFQ-8; Fonagy et al., 2016) allows the measurement of adolescents' mental states abilities (i.e., the degree of certainty and uncertainty regarding the mental states of mentalization). The questionnaire includes eight items scored on a seven-point *Likert scale* (from 1= strongly disagree to 7 = strongly agree). Each subscale contained six items. Four items were used to calculate scores on both subscales and were scored in opposite directions for RFQ_certainty (i.e., items 1, 2, 3, 4, 5, 6) and RFQ_uncertainty (i.e., items 2, 4, 5, 6, 7, 8) whereas the other four items were unique to each subscale. To capture extreme levels of certainty, responses to subscale items RFQ_certainty are recoded as 3, 2, 1, 0, 0, 0, 0. In turn, the responses to the RFQ_uncertainty subscale items were recoded as 0, 0, 0, 0, 1, 2, 3, The original version RFQ-8 show acceptable internal consistency for both subscales RFQ_certainty (α =.77) and RFQ_uncertainty (α =.65) (Fonagy et al., 2016). In this study, the RFQ-8 was translated into Portuguese and adapted according to the guidelines for the translation of instruments in cross-cultural research using high-quality and blind back-translation (Brislin, 1970). In the current study, the internal consistency coefficients were also acceptable: the RFQ_certainty (α =.71) and the RFQ_uncertainty (α =.65).

Raven's Standard Progressive Matrices

The Raven's Standard Progressive Matrices (R-SPM; Raven et al., 2000) is a non-verbal test aiming to evaluate general cognitive ability, organized into five sets numbered alphabetically. Each set consists of 12 figures presented in black and white. Adolescents were asked to select the missing part from the six or eight options given below each matrix. In each set, the figures became progressively more difficult. The reliability of R-SPM for Portuguese population was adequate (α =.94) (Queiroz-Garcia et al., 2021). The participants' total score includes the number of correct answers, ranging from 0 to 60. In the present study, the administration time varied from 16 to 42 min.

Wisconsin Card Sorting Test

The Wisconsin Card Sorting Test (WCST; Berg, 1948; Heaton et al., 2009) assesses of executive functions in terms of cognitive flexibility, abstract reasoning, and problem-solving (Berg, 1948). This test includes four target cards and 128 response cards (i.e., two packs of 64 cards). Each card represents a different color (C) (green, yellow, blue, and red), shape (S) (crosses, circles, triangles, or stars), and number of figures (N) (one, two, three, or four). The task requires the participant to match the response cards with the stimulus cards while adhering to an undisclosed categorical rule, which they must infer from the examiner's feedback on how correctly or incorrectly they choose. To complete the category, the participant was required to correctly classify ten consecutive cards. The test continued until all six categories (C, S, N, C, S, N) were classified or the entire response deck was used. This task was performed in accordance with the standards provided in the manual by Heaton and colleagues (2009). The test is scored following the eleven performance parameters: 1) *number of trials administered;* 2) *number of correct responses*; 3) *number of total errors*; 4) *number of perseverative responses*; 5) *perseverative errors*; 6) *number of non-perseverative errors;* 7) *number of conceptual level responses*; 8) *number of categories completed*; 9) *number of trials to complete first category;* 10) *failure to maintain set* and 11) *other responses*. For parsimony reasons and considering that there is empirical evidence suggesting that *"perseverative responses"* and *"perseverative errors"* are the most common dimensions used to assess cognitive flexibility (Miles et al., 2021), only these two dimensions were included in the analysis. The reliability of WCST for Portuguese population was adequate (a =.91) (Almeida, 2018).

Satisfaction with Life Scale

The Satisfaction with Life Scale (SWLS; Diener et al., 1985; Portuguese version from Neto, 1993) is composed of five items (e.g., *"In most ways my life is close to my ideal"*), measuring adolescents' overall appraisal of their life. These items are answered on a seven-point *Likert* scale (from 1= strongly disagree to 7 = strongly agree). The internal consistency coefficient found in the current study was the same as it was obtained in the original version (a =.78) (Neto, 1993).

Strengths and Difficulties Questionnaire

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1998, Portuguese version from Fleitlich et al., 2004) includes 25 items that evaluate the following five scales: Emotional symptoms (5 items, e.g., *"Often complains of headaches… (I get a lot of headaches)"*; a = .66), Hyperactivity (5 items, e.g., *"Constantly fidgeting or squirming… (I am constantly fidgeting)";* a = .67), Behavior problems (5 items, e.g., *"Often fights with other children… (I fight a lot);* a = .60), Peer relationship problems (5 items, e.g., "Generally *liked by other children… (other people my age generally like me)*; a = .44), and Pro-social behavior (5 items, e.g., *"Considerate of other people's feelings … (I try to be nice to other people*"); a = .66) (Goodman, 2001). Participants answered these items using a three-point *Likert* scale ("It is not true"; "It is a little bit true" and "It is very true"). The values assigned to each item ranged from 0 (it is not true) to 2 (it is very true) for all items, except for items 7, 11, 14, 21, and 25, in which the response meaning was the opposite (i.e., 0 = it is very true to 2 = it is no true). In this study, we included only the total problems scale in the analyses. The total difficulties scale was created by adding the results from each scale, except for the Pro-social Behavior Scale which should not be included. The internal reliability of the total difficulties scale in the original version was a = .80 (Goodman, 2001) and in the current study was a = .73.

Juvenile Victimization Questionnaire – 2nd Revision

The Juvenile Victimization Questionnaire – 2nd Revision (JVQ-R2 – Screening Sum Version, Youth Past-Year Form; Finkelhor et al., 2011; Portuguese version from Magalhães, 2008, revised in the current study) aims to provide a comprehensive picture of the multiple forms of victimization that individuals responded considering the last year. This instrument is composed by five modules (A, B, C, D and E) with 34 items: Module A- Conventional Crime (9 items, e.g., "*In the last year, did someone steal something from you and never return it to you again?*

Things like a bag, a watch, a bicycle, a radio or something like that?"); Module B - Child Maltreatment (4 items, e.g., "*In the last year, did someone important in your life hit you, kick you or physically hurt you in any way?"*); Module C - Peer and Sibling Victimization (6 items, e.g., "*Sometimes youth groups or gangs attack people. In the last year, did any of these groups attack you or beat you?"*); 4) Module D - Sexual Victimization (7 items, e.g., "*In the last year, did someone you know touch you in your intimate areas (genitals) or force you to touch when you didn't want it?"*); Module E -Witnessing and Indirect Victimization (8 items, e.g., "*In last year, have you ever seen any of your parents being beaten by the other, for example, being slapped, hit or beaten?"*). Each item is answered using a dichotomous scale - yes or no. Higher scores indicate a greater number of victimization experiences. Dichotomous items were summed to create the total victimization score, which showed very good global reliability in the current study (α = .89).

Instruments filled out by care workers

Sociodemographic questionnaire

A sociodemographic questionnaire was filled out by care workers in residential care, focusing on their age, gender, educational year, and number of years working in residential care.

Sociodemographic questionnaire regarding adolescents' characteristics

A sociodemographic questionnaire was filled out by care workers in residential care that focused on adolescents' previous history within the child protection system, reasons for placement, number of placements, or their contacts with the family.

Child Maltreatment Severity Questionnaire

The Child Maltreatment Severity Questionnaire (MSQ; Calheiros et al., 2019) was used to assess the child maltreatment experienced by young people previous their placement in residential care. It consists of 18 items, and in the current study, it was completed by a care worker who knows the child protection case of each adolescent. Each item includes four descriptors of increasing severity rated on a 5-point frequency scale (1 = unknown/never, 2 = once/rarely, 3 = sometimes, 4 = frequently, and 5 = often/recurrently/current situation). Three dimensions were assessed: Psychological Neglect (6 items, e.g., "*age-appropriate autonomy"*; α = .79), Physical and Psychological Abuse (4 items, e.g.," *aggressive verbal interaction"*; α = .80) and Physical Neglect (8 items, e.g., "*clothing, food"*; α = .86) (Calheiros et al., 2021). In

the current study, the internal reliability of the three dimensions was acceptable: Psychological Neglect (α = .68), Physical and Psychological Abuse (α = .83), and Physical Neglect (α = .76).

Data collection

This study was approved by the Ethical Committee of the University (Ref:.133/2022 and 42/2023). One hundred and twenty residential care homes (not therapeutic care or juvenile corrective) from different regions of Portugal were invited by e-mail to participate in this study. Of the 120 residential care homes invited, 87 responded, of which 39 stated unavailability, for reasons related to: young people placed in the setting do not meet the required age inclusion criterion, a lack of time for data collection, or the young people are already involved in other research projects (which also require data collection). Moreover, 48 residential care settings asked for more information about the study and expressed interest in participating. In these cases, online (in the Zoom app) or face-to-face meetings in residential care facilities were arranged between the first author and the directors of the residential settings to explain the main objectives of the study and conditions of participation. Adolescents aged 12 to 17 years who understood the Portuguese language were included, and those with significant cognitive impairment were excluded. After the online or in-person meetings with the directors of the 48 residential homes, 20 accepted to participate.

Consent and informed assent were obtained from the legal guardians of each adolescent in residential care and the adolescents themselves, respectively. The care workers also provided consent to participate in the study and to complete the questionnaires. Participants were informed about the study's conditions (objectives, duration), the voluntary nature of their participation, the right to drop out, and the guarantee of data confidentiality. After the informed consent procedure, the participants stated that they understood all the information and agreed to participate.

Data were collected between May 2023 and February 2024. From a total sample of 418 children and adolescents from 20 residential settings, 156 fulfilled the inclusion criteria and were recommended to participate in this study. All 156 adolescents agreed to participate in data collection; however, one adolescent dropped out. For this reason, only 155 were included in the present study. This study's protocol was not published.

Data analyses

Data analyses were performed using the *IBM SPSS software* (version 28). To address the objectives of this study, mental health status groups were created based on adolescents' well-being and psychopathology scores. A composite of the Life Satisfaction Scale was created through the mean of the five items of the scale, and the adolescents' scores ranged from 1 to 7 (M = 4.09; SD = 1.45). For the psychopathology dimension, the total difficulties scale was obtained through the sum of the scores of all scales of the SDQ (except for the Pro-social Behavior Scale). The score may range from 0 to 40; in this study, it ranged from 2 to 31 (M = 16.19; SD = 5.79). Adolescents were classified in terms of their total difficulties according to the following cut-points: close to average, 0-14 points; slightly raised, 15-17 points; high, 18-19 points; and very high, 20-40 points), based on the scoring instructions (https://www.sdqinfo.org/py/sdqinfo/c0.py). To identify groups of young people scoring high and low in the well-being dimension of mental health, percentiles analysis was performed: Life satisfaction [percentile 30 - score ≤ 3.20 (Low life satisfaction) and score > 3.20 (Medium/High Life satisfaction). For the psychopathology dimension, adolescents were classified in terms of low/average levels of symptoms (i.e., total scores between 0-17) and high/very high levels of symptoms (i.e., total scores between 18-40). Four mental health groups were created by crossing psychopathology and well-being (Table 16).

Table 16

Composition of Dual Factor Groups based on adolescents' reports

	Well-being	
Symptoms	High	Low
Low	PMH (*n*= 68; 44%) Female *n* = 30 (44%) Male *n* = 38 (56%)	Vulnerable (*n*= 25; 16%) Female *n* = 19 (76%) Male *n* = 6 (24%)
High	SBC (*n*= 39; 25%) Female *n* = 25 (64%) Male *n* = 14 (36%)	Troubled (*n*= 23; 15%) Female *n* = 15 (65%) Male *n* = 8 (35%)

Note. N = 155; PMH = Positive Mental Health; SBC = Symptomatic but Content

Parametric tests were used for statistical analyses unless the assumptions of homogeneity and normality were not verified. A summary of the decisions made about analysis resulting from homogeneity and normality tests is described in the supplementary material. In the present study, effect sizes of partial eta squared (η^2_p) were interpreted such as: $\eta^2_p \approx 0.01$ as small, $\eta^2_p \approx 0.06$ as medium, and $\eta^2_p \approx 0.14$ as large (Cohen, 1988).

Results

Group differences on sociodemographic variables

First, we examined whether the groups (i.e., PMH, SBC, Vulnerable, and Troubled) differed in terms of gender, age, length in residential care (i.e., in the current setting and total), and the number of previous placements. Statistically significant gender differences were found (X^2 (3) = 9.736; p = .021), as the PMH group included more boys than girls, but the opposite pattern was found for the other three groups. There were also differences in terms of placement length in residential care in the current setting (X^2_{KW} (3) = 7.947, p = .047); however, according to the multiple comparisons of order means, there were no significant differences between groups (p >.05) in the current setting. Regarding total placement length in residential care, the findings revealed differences between the groups (X^2_{KW} (3) = 10.124, p = .018). Specifically, the PMH group revealed greater placement length in the residential care system (M = 36.2) than the Vulnerable (M=20.0) group (p =.039). Non-significant differences in terms of age (X^2_{KW} (3) = 1.482, p =.686) and number of previous placements (X^2_{KW} (3) = 5.844, p = .119) were found.

Group differences on victimization and maltreatment

Second, we examined whether the groups differed in their exposure to victimization and maltreatment. Significant differences were found for victimization (X^2_{KW} (3) = 22.54, p< .001). A comparison of estimated means using Bonferroni correction showed that adolescents in the PMH and Vulnerable (p =.027) and PMH and Troubled (p <.001) groups differed significantly from each other. Specifically, the PMH group showed higher levels of victimization (M = 30.1) than did the other groups (SBC M = 27.0; Vulnerable M = 26.8).

We then assessed group differences in the scores on the three dimensions of the maltreatment severity questionnaire (MSQ) through a multivariance analysis (MANOVA). As such, non-significant differences were found between the four groups in the three dimensions of the MSQ: *Physical neglect*, F(3, 154) = .881; p = .453; *Physical and psychological abuse*, F(3, 154) = 1.017; p = .387; and *Psychological neglect*, F(3, 154) = .379; p = .768.

Group differences in Resources

We tested whether the groups differed in protective resources by conducting a multivariate analysis of covariance (MANCOVA) to explore resources (parents, peers, and caregivers' attachment) on the groups (PMH, SBC, Vulnerable, and Troubled), and gender, placement length in residential care, and victimization scores were included as covariates, since previous significant differences were found among these variables by groups.

The results revealed significant multivariate main effects for all sources of attachment. Specifically, significant and medium effects were found for *Parents* (F(3, 143) = 3.300, p = .022, partial eta squared = .067) and *Peers* (F(3, 143) = 2.890, p = .038, partial eta squared = .060); but significant and medium-large effects were found for *Caregivers* (F(3, 143) = 6.386, p <.001, partial eta squared = .123). The post-hoc Tukey HSD test revealed that the PMH and SBC groups differed significantly from the Troubled group. Specifically, both the PMH (p < .001) and SBC (p <.001) groups reported greater parental attachment than the Troubled group (Table 17). In terms of peer attachment, the results showed that the PMH group reported higher scores than the Troubled group (p =.017). Finally, in terms of caregivers' attachment, the PMH group scored significantly higher than the Vulnerable (p <.001) and Troubled (p =.011) groups, and the same findings were obtained for the SBC group, which scored significantly higher than the Vulnerable (p =.003) and Troubled (p =.037) groups.

Table 17

Adjusted Group Means and Standard Deviations of Resources

	Groups							
	PMH (*n*=68)		SBC (*n*=39)		Vulnerable (*n*=25)		Troubled (*n*=23)	
Resources	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Parent Attachment	3.94	.87	3.88	1.04	3.48	.93	2.90	1.11
Peer Attachment	3.95	.66	3.72	.73	3.60	.98	3.39	.89
Caregivers Attachment	3.86	.77	3.83	.90	3.06	.89	3.22	.89

Note. *M* = Mean; *SD* = Standard deviation; PMH = Positive Mental Health; SBC = Symptomatic but Content

Group differences in Coping Behavior

We conducted a parametric test (MANCOVA) to explore coping behavior strategies (i.e., control, refusal and conversion), the groups (PMH, SBC, Vulnerable, and Troubled), and gender, length total in residential care, and victimization scores as covariates. The results revealed significant differences for the three coping strategies. Significant and medium effects were found for *Control* (F(3, 143) = 3.014, p =.032, partial eta square = .062); significant and small effects were found for *Refusal* (F(3, 143) = 2.876, p =.038, partial eta squared = .059) and significant and large effects were found for *Conversion* (F(3, 143) = 6.749, p < .001, partial eta squared = .129). The post-hoc test (Tukey HSD) revealed that the PMH (p =.033) and SBC (p =.043) groups reported more *Control coping strategies* than the Vulnerable group. Regarding to *Conversion coping strategies,* the PMH group differed from the SBC (p <.001) and Troubled (p <.001) groups, and the Vulnerable group differed from the Troubled group (p = .048). Specifically, the PMH group uses this type of strategy (*Conversion coping strategy*) the least than the SBC and Troubled groups. In addition, the Troubled group uses this strategy significantly more than the Vulnerable group. Regarding *Refusal Coping* strategy, the post-hoc test (Tukey HSD) revealed no significant differences between the groups (p >.05) (Table 18).

Group differences in Assets

The results revealed significant and large effects in the two dimensions of mentalization included in this study: *Certainty* (F(3, 143) = 8.088, p < .001, partial eta square = .150) and *Uncertainty* (F(3, 143) = 6.104, p <.001, partial eta squared =.118). The post-hoc test (Tukey HSD) revealed that in terms of *Certainty mentalization*, the PMH group scored higher than the SBC (p =.002) and Troubled (p =.007) groups. The SBC group scored lower than the Vulnerable group (p =.027), and the Vulnerable group scored greater that the Troubled group (p =.041). In terms of *Uncertainty mentalization*, the PMH group scored lower than the SBC group (p <.001), and the SBC group scored higher than the Vulnerable group (p =.017) (Table 18). In terms of executive functioning, analyses showed no statistically significant differences between the groups regarding the two dimensions of executive functioning: *Perseverative responses*, (X^2_{KW} (3) = .555, p = .907) and *Perseverative errors* (X^2_{KW} (3) = .978, p = .807).

Finally, differences among groups in cognitive skills were further examined through ANCOVA, which revealed no statistically significant differences (F(3, 135) = 1.671; p = .176; partial eta square = .038) between the groups (PMH, SBC, Vulnerable, and Troubled), including gender, length total in residential care, and victimization scores as covariates.

Table 18

Adjusted Group Means and Standard Deviations of Coping Behavior and Assets

	Groups							
	PMH (*n*=68)		SBC (*n*=39)		Vulnerable (*n*=25)		Troubled (*n*=23)	
Assets	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Control[1]	3.66	.87	3.69	.80	3.10	.86	3.31	.94
Refusal[1]	2.79	.86	3.24	.98	2.68	.86	2.72	.94
Conversion[1]	2.07	.90	3.08	1.16	2.65	.87	3.39	.94
Certainty[2]	.95	.75	.38	.46	.80	.72	.30	.31
Uncertainty[2]	.87	.67	1.65	.83	1.10	.55	1.39	.84
NPR[3]	29.4	17.9	32.3	27.5	34.5	21.8	31.5	13.2
NPE[3]	20.5	17.9	22.9	20.8	24.5	15.2	21.7	9.91
Cognitive skills	37.8	9.32	35.5	10.0	34.7	9.95	39.1	9.43

Note. M = Mean; *SD* = Standard deviation; PMH = Positive Mental Health; SBC = Symptomatic but Content; [1]coping strategies; [2]mentalization; [3]executive functioning. NP = No. of perseverative responses; NPE = No. of perseverative errors

Discussion

This study examined the protective factors associated with different mental health profiles among adolescents in residential care, thereby filling two gaps in the literature. First, most studies guided by the Dual Factor Model of Mental Health have focused on school adjustment (Magalhães, 2024), and few studies have empirically tested this model in residential care (Magalhães & Calheiros, 2017). Second, although some research on young people in residential care has included mental health as a two-dimensional concept (i.e., including well-being and psychopathology; Magalhães & Calheiros, 2017), there is a lack of evidence regarding protective factors that might operate to improve adolescents' adaptive functioning supported by a robust and theoretical framework of resilience. To the best of our knowledge, this is the first empirical study to explore the resilience of adolescents in residential care by combining both the Dual Factor Model of Mental Health (Antaramian et al., 2010) and the Resilience Portfolio Model (Grych et al., 2015).

Supporting our first hypothesis, findings revealed that adolescents in residential care might exhibit different profiles of mental health. The PMH group was the most prevalent (44%),

characterized by an average to medium/high level of well-being and a low level of psychopathology. This means that, even scoring higher on victimization, young people in the PMH group can show positive adaptation and, consequently, are the group with more protective factors in their resilience portfolio. In addition, 25% of our sample falls within the SBC group, exhibiting high levels of psychopathology yet still reporting medium/high life satisfaction, which suggests that dealing with psychopathology does not inhibit achieving high levels of well-being. These findings highlight that mental health is better conceived as a two-dimensional model than a one-dimensional perspective (Antaramian et al., 2010; Magalhães & Calheiros, 2017; Magalhães, 2024). Furthermore, 16% of the adolescents in this study belong to the Vulnerable group. These adolescents exhibit both low well-being and psychopathology and are therefore considered mentally healthy according to traditional models because they do not exhibit significant symptoms (Antaramian et al., 2010). However, compared with the PMH group, they showed low life satisfaction, indicating poor well-being, which is critical given that psychosocial interventions may overlook them as they do not show significant psychological difficulties (Magalhães & Calheiros, 2017). Therefore, in addition to reducing symptoms, it is important to implement interventions focused on fostering adolescent well-being in these settings. Finally, 15% of our sample belonged to the Troubled group, which involves high psychopathology, poor well-being, and fewer protective factors than the other groups.

Overall, the prevalence of the four groups in this study was consistent with previous research that reported higher percentages in groups with higher levels of well-being (e.g., PMH and SBC; Magalhães, 2024). Nevertheless, the current findings are not consistent with some evidence that includes at-risk groups, such as youth in residential care, given that we found a greater percentage of young people in the PMH (44%), in contrast to Magalhães and Calheiros (2017), who found a greater percentage of youth in the Troubled group (35%). These differences could be related to the cut score approach applied by the authors in their study (Magalhães & Calheiros, 2017), wherein the participants' scores were classified as high or low on the dimensions of well-being. In this study, due to the small sample size, we classified adolescents in terms of well-being using the medium/high life satisfaction cut-off points to prevent the exclusion of participants who presented medium scores.

Supporting our second hypothesis, we found that the PMH group reported more protective factors in their resilience portfolio. Specifically, this group (with high levels of well-being and low symptoms) reported greater resources, such as attachment to parents, peers, and caregivers, than the Troubled group. This means that the quality of attachment to significant others in

different contexts (i.e., family, residential care) might buffer previous risks and foster adolescents' well-being. Therefore, these results highlight that when an adolescent is placed in residential care, the quality of the relationships between significant others (e.g., family, peers, and caregivers in residential care) should be considered and included when designing interventions in these settings (Pinheiro et al., 2024).

Furthermore, the PMH group reported more control coping strategies, which means that when these youth face a stressful situation, they might find a more effective resolution, instead of avoiding stressful situations (Nunes et al., 2014). Coping strategies focused on problems are associated with positive mental health outcomes (Arslan, 2017), as its foster adolescents' sense of competence and self-efficacy when dealing with stressful events (Pinheiro et al., 2021). Regarding conversion coping strategies, adolescents in the PMH group reported this type of strategy less frequently than the groups with high psychopathology (i.e., SBC and the Troubled group). This means that in face of stressful situations, adolescents in the PMH group are those who tend to avoid least social contacts (e.g., "avoid meeting others"; "stay away from others"; Nunes et al., 2014). This type of strategy is credited with non-problem-solving effectiveness and typically has negative effects on symptoms, because people believe that they cannot handle the situation and do not seek social support (Moreno-Manso et al., 2021).

Finally, beyond resources and coping strategies, this study revealed the importance of mentalization as a protective factor for the PMH group. Specifically, the PMH group reported the highest levels of *certainty mentalization* and the lowest levels of *uncertainty mentalization* compared to the groups with high symptoms (i.e., SBC and Troubled). Literature suggests that mentalizing is a developmental capacity that shows a person's ability to understand and describe their own and other people's internal mental states, such as feelings, wishes, and attitudes (Fonagy et al., 2016). This capacity is linked with better social relationships because these skills enable one's comprehension of their behaviors and their integration into society (Ballespí et al., 2021). In contrast, difficulties in mentalization are associated with strains in social and psychological functioning. As such, the ability to mentalize might foster adolescents' self-regulation (Fonagy et al., 2005) and decrease interpersonal conflict (e.g., impulsivity and aggressive behavior; García-Sancho et al., 2014).

Putting these findings together, the evidence gathered in the current study suggests that the PMH group might benefit from the cumulative protective role of the quality of attachment relationships as an enhancer of an individual's capacity to mentalize (Fonagy et al., 2016). Therefore, secure attachment relationships with significant others, guided by sensitivity and

responsiveness contingent on children's emotional needs, are crucial for the development of this mentalization ability (Fonagy et al., 2016; Gambin et al., 2021). Adolescents who experience secure dyads develop positive working models about themselves and others (Gambin et al., 2021; Jacobsen et al., 2015), which, in turn, enables them to understand and describe their own and other individuals' mental states, feelings, and attitudes (Fonagy et al., 2016) and to reveal higher well-being (Ballespí et al., 2021). In sum, the PMH group revealed a resilience portfolio that includes more protective factors at different levels (i.e., assets, resources and coping) than the other groups.

In contrast, the resilience portfolio of the Troubled group seems to be more impaired. This group showed the lowest scores in terms of attachment to significant others, coping, and mentalization. In particular, they lack resources related with parental and peer attachments. Bearing in mind that this is a cross-sectional study, and for this reason, no causal inferences can be drawn from it, we cannot guarantee that attachment leads to more positive or negative mental health outcomes. However, the absence of high scores of attachment in the "resilience portfolio" of the Troubled group appears to explain the low scores of well-being and the high scores of psychopathology. Whereas the high quality of attachment tends to maintain an adolescent on a more optimal trajectory (i.e., high well-being and low psychopathology), poor attachment moves adolescents toward less adaptative functioning (Kobak et al., 2015). Furthermore, difficulties in mentalization may be associated with difficulties in social and psychological functioning, as we found in our study as *uncertainty mentalization* was associated with increased psychopathology. The adolescents in this group may have more difficulties to manage their emotions and feelings (Ballespí et al., 2021) than adolescents in other groups, which consequently impacts their self-regulation (Fonagy et al., 2005) and pro-social behavior (García-Sancho et al., 2014). The same pattern applies to coping strategies, as adolescents who believe that they cannot deal with problems (Moreno-Manso et al., 2021), may reveal greater symptoms. Accordingly, the lack of assets, coping strategies, and resources seems to contribute to the poor outcomes in terms of mental health (i.e., low well-being and high psychopathology) in the Troubled group.

The resilience portfolios of adolescents in SBC and PMH showed a similar pattern, particularly concerning to resources and coping strategies. We also found that the SBC group reported higher levels of attachment to their parents, peers, and caregivers than the Vulnerable and Troubled groups did. This evidence proposes that, even if young people show emotional or behavioral difficulties, attachment to significant others and control coping strategies may

enable them to grow and achieve well-being (Arslan, 2017). Finally, the Vulnerable group had the lowest attachment scores to caregivers in residential care when compared to all other groups in this study; yet, when compared to the SBC and Troubled groups, they had better scores on coping (reported fewer conversion coping strategies) and mentalization (reported more *certainty mentalization*). In terms of resources, this finding reveals that the relationships with caregivers in residential care can be critical for adolescents' well-being. Given that adolescents in the Vulnerable group had been in residential care for a shorter period than those in the other groups, this finding might be related to the placement length, considering that lasting, consistent, and trustworthy relationships are vital to establish meaningful affective bonds (Duppong-Hurley et al., 2017), including in residential care (Pinheiro et al., 2022).

Furthermore, given that Vulnerable adolescents do not exhibit significant mental health problems, they can be perceived by staff as having the lowest priority in terms of the intervention while they are in care. This result stresses the importance of promoting the quality of relationships in residential care, even when adolescents do not exhibit psychological symptoms. Accordingly, relationship quality might function as an opportunity for an internal organization of adolescents' working models which helps them grow more adaptable to overcoming adversity (Mota & Matos, 2010), which in turn might foster their well-being. Adolescents in residential care who feel that residential care providers are concerned about them, feel valued, socially accepted, and less alone are more likely to build meaningful relationships and to reveal more positive functioning and well-being (Pinheiro et al., 2022). In terms of coping strategies, the Vulnerable group showed the same pattern as PMH, indicating fewer conversion coping strategies than the other groups with high symptoms (i.e., SBC and Troubled groups). A similar tendency was confirmed for assets because the Vulnerable groups revealed less use of *uncertainty mentalization* than the SBC and Troubled groups. *Certainty mentalization* appears to be associated with lower psychopathology, since the Vulnerable group (who reported the fewest symptoms) scored higher in this dimension. This ability appears to play a significant role in the resilience portfolio of adolescents in Vulnerable group because it improves individuals' ability to handle their feelings and accept others' mental states (Ballespí et al., 2021). For these reasons, mentalization is frequently targeted to restore mental health, making it a common factor in most psychological interventions (Fernández-Sotos et al., 2019). It is important to point out that mentalization-based approaches' ubiquity and utility is not that well-developed yet (Byrne et al., 2020) and findings are equivocal for youth childcare system

(e.g., Akerman et al., 2022). However, this study provides an innovative insight on how mentalization ability might be protective to adolescents' mental health in residential care.

Limitations and Implications for Practice

Despite the innovative evidence obtained in this study, a set of limitations should be considered. As this was a cross-sectional study, causality among the variables could not be determined. Thus, longitudinal studies are recommended to better understand whether these protective factors lead to resilient trajectories in adolescents in these settings. Participants in this study are young people from a hard-to-reach population. Neither participants nor residential care facilities received compensation to participate in this study. This study also used a multi-method approach, which included tasks and questionnaires. To prevent overwhelming the participants, breaks were taken during the data collection process if needed. Thus, this study used a small and non-representative sample (N=155) of adolescents in non-specialized residential care, which limits the generalizability of our findings. Larger and more representative samples are required to obtain further evidence on this topic and enable the application of statistical methods such as Latent Profile Analysis, which may bring additional contributions to this approach. Although some of the SDQ's dimensions have questionable validity, in this study we made an effort to address these points of concern and increase their accuracy by including the SDQ total difficulties score. We also recognized that there are some psychometric issues with the RFQ questionnaire. Nevertheless, it is challenging to overcome this limitation due to a lack of a suitable alternative to assess youth's mentalization (Akerman et al., 2022).

Despite these limitations, this study offers important insights into and implications for residential care. Our findings highlight that combining a strengths-based approach of resilience (including resources, coping, and assets; Grych et al., 2015) and the Dual Factor Model framework is a powerful way to understand adolescents psychological functioning in residential care. For instance, if we merely assessed indicators of psychopathology, adolescents in PMH and Vulnerable groups would have been combined since both reported low levels of symptoms. Nevertheless, although they reported similar experiences of adversity (e.g., abuse and neglect), they also reported different well-being statuses. In this study, the PMH group consistently reported more resilience factors. It is important to note that all of these adolescents experienced adversity (e.g., abusive parenting and separation from the family context; Magalhães & Calheiros, 2017); however, considering their different mental health profile, practices and

interventions in these settings should focus on adolescents' needs rather than on a one-size-fits-all strategy (Magalhães & Calheiros, 2017; Magalhães, 2024).

Regarding resources (i.e., quality of the relationships), adolescents in the Troubled group (i.e., those with high symptoms and low levels of well-being, and who report fewer resources in their resilience portfolio) might benefit from interventions focused on enhancing the quality of the relationships in residential care and other contexts (e.g., family). Thus, it is essential to mobilize family resources (i.e., nuclear or extended families) into the intervention, particularly when family reunification is possible. In such cases, intervention efforts should focus on preserving family attachments or enhancing the quality of parent–adolescent relationships, including providing parental training on communication skills as well as fostering the role of parents as partners in the process (Jiang et al., 2013). Thus, efforts should be made to maintain (for PMH and SBC groups) and foster (for Vulnerable and Troubled groups) the resources (regarding attachment and relationship quality) available to adolescents in residential care. Trauma-informed approaches might benefit adolescents in these settings as they foster a sense of safety and encourage interventions that improve the quality of their relationships with caregivers (Bailey et al., 2019). This safe environment may also foster the ability of adolescents in residential care to reflect on their own and other mental states (i.e., mentalization) through group mentalization-based therapy approaches (Jacobsen et al., 2015; Ballespí et al., 2021).

Finally, as shown in this study, the quality of the relationships between adolescents and caregivers in residential care seems to be undermined in the Vulnerable group. A new secure context (i.e., residential care setting) including trustful and responsive caregivers can offer an opportunity to develop more healthy relationship models. The staff turnover and the ratio between youth and providers can be especially challenging to ensure high-quality relationships (Pinheiro et al., 2022). As such, the recruitment of caregivers should focus not only on their knowledge but also on their interpersonal skills (Magalhães et al., 2021; Pinheiro et al., 2022), and improvements are needed regarding working conditions with the necessary support and resources (e.g., training on relational dynamics, adequate number of caregivers per child or adolescent, and preventing staff turnover) (Mota et al., 2018).

CHAPTER VIII

GENERAL DISCUSSION

General Discussion

Identifying protective factors for resilience in adolescents in residential care is the key to providing effective interventions in out-of-home. Despite their importance, studies that consider resilience as a dynamic process and the role of protective factors in adolescents' psychological health in residential care remain scarce, with most focusing on factors explaining young people's mental health problems (Lou et al., 2018). The main objective of this dissertation was to identify the resilience portfolio associated with the psychological health of adolescents in residential care. Accordingly, the main research question was '*Which protective factors foster the psychological health of adolescents in residential care?*'. To address this question, five studies were developed, and the Figure 4 summarize the main findings of these studies. A mixed methods approach (i.e., systematic review, meta-analysis, qualitative, and quantitative studies) using complementary methods for data collection (i.e., semi-structured interviews, self-report measures and tasks) was adopted in this dissertation, considering the voices of multiple informants (adolescents and care workers). The findings of these five studies contribute to expanding the knowledge of resilience factors that foster the psychological health of adolescents in residential care.

The current general discussion provides an integrative reflection on the theoretical and practical implications of all studies, rather than providing a detailed description of the findings as it was provided before in each study. This discussion also seeks to identify research limitations of our studies, providing recommendations for future research about resilience of adolescents in residential care.

Figure 4

Summary of the main findings from the empirical studies

Chapter III **Study 1**	Chapter IV **Study 2**	Chapter V **Study 3**	Chapter VI **Study 4**	Chapter VII **Study 5**
Specific research questions				
Which protective factors are associated with adolescents' psychological health in RC?	Which protective factors produce the *largest effect sizes* on adolescents' psychological health in RC?	What are adolescents' perspectives on the concept of resilience and on protective factors for psychological health in RC?	What are the care workers' perspectives on the concept of resilience and on protective factors for psychological health of adolescents in RC?	Which are the protective factors associated with different mental health group profiles of adolescents in RC?
Sample and the type of the study				
Systematic review 11 papers	Meta-analysis 29 papers	Qualitative study 19 adolescents in RC	Qualitative study 15 care workers in RC	Quantitative study 155 adolescents and care workers in RC
Main findings				
Protective factors: **Assets:** Cognitive and social skills, empathy, intolerance of deviant behaviors, positive attitude towards school, religious beliefs **Resources:** family, RC, community **Coping:** Active coping and problem-solving	**Protective factors with the most significant impact on resilience outcomes:** **Assets:** individual self-regulatory strengths **Resources:** support received from staff, family and peers	**Resilience:** A lack of knowledge about the concept **Protective factors:** (most reported) **Assets:** being cooperative **Resources** staff and a peer support in RC, family support **Coping:** meaning making activities	**Resilience:** The ability to overcome difficult situations **Protective factors:** (most reported) **Assets:** self-qualities in RC, regulatory competences **Resources:** support provided in RC; support by family and school, collaborative approaches services and relatives **Coping:** help-seeking	**Protective factors:** **Assets:** mentalization (reflexive function) **Resources:** quality relationships between adolescents and family, peers and caregivers in RC **Coping:** control coping, conversion coping

Resilience Portfolio of Adolescents in Residential Care

This dissertation adopted the Resilience Portfolio Model (Grych et al., 2015) to identify the protective factors that foster the psychological health of adolescents in residential care. The rationale for selecting this framework to guide the five studies included in this dissertation stems from the following reasons: 1) this model combines various approaches for studying resilience (e.g., process, ecological, developmental, and biopsychosocial) into a unique comprehensive model; 2) this model aligns with the positive psychology perspective by identifying strengths that enhance individuals' psychological health; and 3) it synthetizes protective factors at different levels and psychological health dimensions.

The first study (Chapter III) offered a first step toward expanding the knowledge about adolescents' resilience in residential care in two ways: first, these findings showed that adolescents in residential care may exhibit psychological health despite adversity; and second, they highlighted the importance of considering resilience as a dynamic process of assets and resources, rather than as a stable characteristic or individual attribute. The study also identified key gaps in the literature, which served as guidance for the following studies in this dissertation, including the lack of qualitative, mixed-methods and multi-informant research. Additionally, most empirical research still focuses on psychopathology (but not well-being and competence), and most studies only explored symptoms or well-being instead of exploring both simultaneously (i.e., including positive and negative indicators of psychological health) (Grych et al., 2015).

Moreover, Study 1 raised awareness of the importance of identifying the specific contribution of each protective factor to adolescent resilience in residential care, therefore, Study 2 advanced this research through a meta-analysis (Chapter IV). This meta-analysis was conducted to identify the protective factors that had the largest effect sizes on the psychological health of adolescents in these settings. Together, the pattern of results obtained in this study highlights the role of some protective factors identified previously in the systematic review (Study 1) (e.g., individuals' self-regulatory strengths, family, and staff in residential care). Nevertheless, in this meta-analysis, the prevailing contribution of support provided by staff in residential care in all dimensions of psychological health (i.e. psychopathology, well-being, and competence) was remarkable. This means that supportive relationships from staff in residential care are key to ensuring psychological health in adolescents in these settings which is in line with previous studies focused on the relationship

between young people and professionals in care (e.g., Ferreira et al., 2020; Magalhães et al., 2021; Pinheiro et al., 2022).

Considering the previous findings from Study 1 (e.g., the scarcity of qualitative studies) and Study 2 (e.g., the key role of professionals in residential care), the perspectives of adolescents in these settings and professionals (i.e., care workers) on how both portray resilience and the protective factors that explain psychological health were crucial in this work. On the one hand, adolescents are experts in their lives (Calheiros et al., 2011), and their contribution was vital in this dissertation because they were able to provide valuable insights into their own functioning which may not be apparent in the reports of others (Bell & Romano, 2015). On the other hand, professionals' practices are critical to adolescents' recovery and are influenced by their beliefs and representations (Calheiros et al., 2011). These different perspectives allowed us to obtain in-depth knowledge about the factors associated with adolescents' resilience in residential care. The results revealed that, while both adolescents and care workers considered the importance of the cumulative protective role of healthy relationships with significant others (e.g., staff in residential care, family) in various micro-systems to enhance and foster psychological health in residential care, only care workers highlighted the role of collaborative and ecological strategies to improve the outcomes of a child welfare intervention, that is, a successful family reunification or an appropriate transition from care to an independent life. This evidence suggests that care workers in residential care understood the value of their work in the promotion of resilience (Bell & Romano, 2015), and that the cooperation among all contexts in which adolescents are actively involved is essential to the intervention's effectiveness.

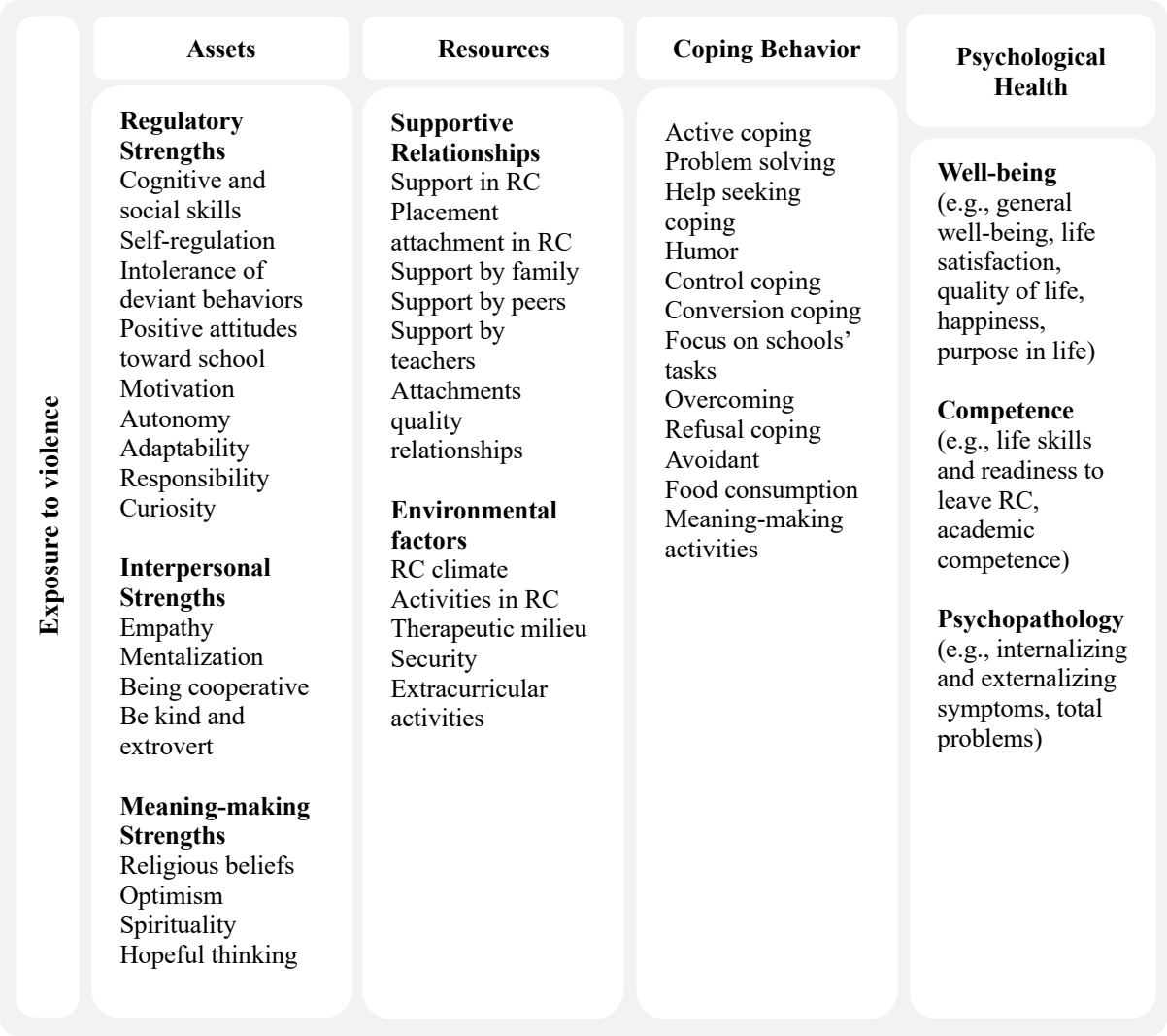
Findings from studies 1, 2, 3 and 4 in this dissertation strengthened the assumption that resilience can be understood as a multidimensional construct, suggesting that studying psychopathology alone is insufficient for understanding the psychological health of adolescents in residential care (Magalhães & Calheiros, 2017). As highlighted in our earlier research, psychological health does not include only psychopathology, but rather it should combine indicators such as competence (e.g., life skills) and well-being (e.g., life satisfaction) (Figure 5) for adolescents in residential care. Specifically, study 5 further supports these findings by identifying and comparing distinct mental health groups and shows that adolescents in residential care can be distinguished in terms of their resilience portfolio. To our best knowledge, this study was the first empirical study guided by the combination of two frameworks (i.e., Dual Factor Model of Mental Health and the Resilience Portfolio Model) with

adolescents in residential care. Thus, this dissertation offers innovative evidence regarding how diverse protective factors operate in different profiles (i.e., Positive Mental Health, Symptomatic but Content, Vulnerable, and Troubled) of adolescents in these settings. On the one hand, study 5 shows that interventions should be tailored to the needs of adolescents rather than using a one-size-fits-all approach (Magalhães & Calheiros, 2017; Magalhães, 2024). On the other hand, it strengthened the role of important factors for psychological health previously identified in our studies (e.g., quality attachment with significant figures), while other factors (e.g., mentalization) extended previous research in this field.

Taken together, the five studies presented in this dissertation significantly contributed to addressing gaps in the literature and to the progress of research in this field - building on different informants (i.e., adolescents and care workers in residential care), mixed methods (e.g., systematic review, meta-analysis, qualitative and quantitative studies), and multi-method (e.g., semi-structured interviews, questionnaires, or tasks) approaches. Our findings empirically support the premise that adolescents in residential care may exhibit resilience despite experiencing adversity (e.g., experiences of abuse and neglect), and that they may have a diverse resilience portfolio (Figure 5) that depends on the interplay between assets, resources, and coping strategies (Grych et al., 2015). Figure 5 shows all the factors that were identified in our studies. Nevertheless, only some protective factors were commonly identified in the five studies which deserve particular attention when interventions in residential care are designed. For instance, coping strategies, regulatory strengths, and resources, such as meaningful relationships (e.g. by professionals in residential care, family, and peers), were the most expressive. Finally, our five studies showed that the relationship with professionals in residential care is crucial and significantly affects adolescents' psychological health, particularly, in all psychological health outcomes (i.e., psychopathology, well-being and competence), as shown in our meta-analysis.

Figure 5

Resilience Portfolio of Adolescents in Residential Care



Limitations and Implications for Research and Practice

This dissertation provides innovative and theoretically anchored evidence about resilience in residential care, from a multi-dimensional perspective of psychological health, and goes beyond the traditional approach that merely considers the absence of psychopathology (Magalhães, 2024). Furthermore, this dissertation combined different methodologies, integrating systematic and meta-analytic reviews and qualitative and quantitative methods. However, it has limitations that must be addressed to raise new questions and open new avenues for future research. Given that several limitations related to each study have been addressed in their respective chapters, this section addresses the limitations related to the general theoretical and methodological approaches applied in this dissertation.

First, we did not include a longitudinal study which might have enabled us to test the assumptions of continuities and discontinuities in how protective factors might influence adolescents' trajectories across time in residential care. Future studies should include a longitudinal design to develop these questions further and empirically test the causal relationships between protective factors and resilience outcomes over time. Second, although Studies 4 and 5 included care workers' perspectives, caregivers' views were not explored in any of the studies in this dissertation. These aspects are important because caregivers in residential care are frontline staff who support young people's basic needs and daily routines (Jordan et al., 2009). Third, Studies 3, 4, and 5 did not include samples from diverse regions of Portugal, which limits the generalizability of the findings. To be more inclusive and increase the sample size, residential care settings in other regions of the country should be further recruited. Fourth, further studies should also examine protective factors at the organizational level; for instance, different dimensions of residential care settings (e.g., small or large homes) and experimental studies might be carried out to analyze the role of psychosocial support provided (e.g., therapies, mentorship or educational programs) on the psychological health of adolescents in residential care. Finally, it may be useful to create an assessment tool that includes the protective factors of the resilience portfolio (Figure 5) identified in this dissertation. This allows professionals to preserve and enhance each adolescent's resilience portfolio when they enter residential care.

Nevertheless, given these limitations and considerations, this dissertation provides key contributions to highlighting and understanding the role of different protective factors (individual and contextual) in the resilient outcomes of adolescents in residential care. This is even more important in the case of the Portuguese out-of-home care system since because of several challenges: 1) the Portuguese out-of-home care system has been attempting to lower the number of young people in residential care by encouraging more family friendly options such as foster care or reintegration into their birth family; however, residential care continues to be the most widely used placement measure in the Portuguese context (84%; ISS, 2024), particularly when compared with other countries (e.g., Australia, Ireland, Norway) (Del Valle & Bravo, 2013; James et al., 2022); 2) implementing more extensive programs in residential care might be challenging due to financial limitations and a lack of human resources (James et al., 2022). Finally, 3) these young people are disproportionately disadvantaged (Parry et al., 2022), have a complex trauma history when entering these placements (Ames & Loebach, 2023), and report high rates of previous maltreatment, mainly neglect (physical, emotional, or lack of supervision), and emotional abuse (ISS, 2024; Collin-Vezina et al., 2011).

Specifically, from five studies, we found that practitioners play a critical role in these settings to support the psychological health of adolescents. The relationship between youth and staff is an important therapeutic resource for young people's recovery from residential care (Sulimani-Aidan & Tayri-Schwartz, 2021), which requires highly skilled staff (Pinheiro et al., 2022). Accordingly, it is important for policymakers in the Portuguese out-of-home care system to recognize and value the key role of professionals in residential care and its importance as a resource for adolescent resilience. First, in addition to protecting young people from dangerous situations and ensuring their basic needs, it is important to promote a safe environment that facilitates emotional and affiliative security, which is necessary for children's psychological recovery (Sellers et al., 2020; Whittaker et al., 2016). Additionally, residential care workers must identify and consider each young person's resilience portfolio. As such, interventions must be tailored for each adolescent, considering their mental health needs and the assets, resources, and coping strategies available. Child protection care plans should foster individual strengths (e.g. self-regulation and positive self-perceptions) through child-centered and trauma-informed approaches. These include supporting residential care settings to address individuality, considering the complexities of the impact of adversity and trauma (e.g., of abuse and neglect) experienced by young people, lowering the risk of re-traumatization (Knight, 2015), and improving well-being (Bunting et al., 2019). For instance, Trauma-Informed Approaches could be especially helpful in these contexts because they offer young people a safe environment built on trustworthy and strong relationships with caregivers and peers (Knight, 2015; Sonderman et al., 2021; Whittaker et al., 2016).

Furthermore, according to the literature, the most frequent dimension of the Trauma-Informed Approach is professional training, with a beneficial effect on staff confidence, knowledge, and/or skills (Bunting et al., 2019). Therefore, it is imperative that staff in residential care receive training to enhance their ability to provide complex mental health interventions for young people (Pinheiro et al., 2022). For instance, residential care providers may be able to support them by offering companionship, direction, and advice (Caserta et al., 2016), and by helping young people manage their current lives more effectively (Knight, 2015). Directors in residential care should also help professionals reflect on their needs as frontlines in residential care and meet them to protect their mental health (Galvin et al., 2022), which could potentially contribute to reducing turnover. Promoting a compassionate outlook among colleagues is essential for reducing interpersonal threats and increasing feelings of safety and supportive behaviors in teams. Positive interpersonal relationships between colleagues are

important in caregiving in residential care (Aarons & Sawitzky, 2006) and might be fostered by supervision. Supervision may be useful for increasing staff awareness, comprehension, and the application of evidence-based practices (Bailey et al., 2019). Supervision supports learning, and its integration into daily practice creates opportunities for individual and collective reflection (Curry et al., 2005; Galvin et al., 2022; James et al., 2017; Liu & Smith, 2011). Mutual collaboration between different systems (e.g. residential care, family, school, and community) involving adolescents is needed to ensure more effective interventions. Policy makers need further work to define indicators and quality standards in the out-of-home through rigorous and regular monitoring of conditions in residential care settings. Finally, educational campaigns and tailored messaging should be encouraged to show that adolescents in residential care can exhibit resilience. As a result, this could reduce the stigma attached to young people in residential care and promote cooperation with the out-of-home care system.

In conclusion, the findings of the current dissertation constitute important theoretical contributions that could perhaps decrease the stigma attached to adolescents in residential care as a minority group with behavioral and emotional problems. This dissertation revealed how this group may exhibit psychological health and the factors that contribute to resilience. This is particularly important given the scarcity of studies focusing on protective factors and resilience in residential care and the challenges in the Portuguese out-of-home care system. Additionally, this dissertation shows that simultaneously investigating dimensions, such as psychopathology, well-being, and competence, is crucial for understanding this population's psychological adaptation. Similarly, a robust combination of assets, resources, and coping strategies is crucial when designing interventions in this setting. Young people in residential care should be protected, but they should also be empowered and have the assets and resources to deal with life challenges while preserving their psychological health. This means considering adolescents as competent actors in their lives, including adults, from practitioners in residential care, families, teachers, and the community in general, to improve adolescents' resilience in residential care.

References

Afifi, T. O., & MacMillan, H. L. (2011). Resilience following child maltreatment: A review of protective factors. *Canadian Journal of Psychiatry, 56*, 266–272. https://doi.org/10.1177/070674371105600505

*Aguilar-Vafaie, M. E., Roshani, M., & Hassanabadi, H. (2014). Protective factors enhancing prosocial behavior and preventing internalizing and externalizing symptoms among adolescents living in foster care homes. *Iranian Journal of Psychiatry and Behavioral Sciences, 8*(2), 52. https://pmc.ncbi.nlm.nih.gov/articles/PMC4105604/

*Aguilar-Vafaie, M. E., Roshani, M., Hassanabadi, H., Masoudian, Z., & Afruz, G. A. (2011). Risk and protective factors for residential foster care adolescents. *Children and Youth Services Review, 33*(1), 1-15. https://doi.org/10.1016/j.childyouth.2010.08.005

Ahrens, K. R., DuBois, D. L., Garrison, M., Spencer, R., Richardson, L. P., & Lozano, P. (2011). Qualitative exploration of relationships with important non-parental adults in the lives of youth in foster care. *Children and Youth Services Review, 33*, 1012–1023. https://doi.org/10.1016/j.childyouth.2011.01.006

Åkerman, A. K. E., Holmqvist, R., Frostell, A., & Falkenström, F. (2022). Effects of mentalization-based interventions on mental health of youths in foster care. *Child Care in Practice, 28*(4), 536-549. https://doi.org/10.1080/13575279.2020.1812531

Alink, L. R., Mesman, J., Van Zeijl, J., Stolk, M. N., Juffer, F., Koot, H. M., ... & Van IJzendoorn, M. H. (2006). The early childhood aggression curve: Development of physical aggression in 10-to50-month-old children. *Child Development, 77*(4), 954-966. https://doi.org/10.1111/j.1467-8624.2006.00912.x

Almeida, V. B. F. (2018). *Características psicométricas do Wisconsin card sorting test em várias amostras da população portuguesa* [Psychometric characteristics of the Wisconsin card sorting test in several samples of the Portuguese population]. Retrieved from: https://core.ac.uk/download/pdf/187758863.pdf

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

Anjos, C., Magalhães, E., Graça, J., Pinto, V. S., Baptista, J., & Pinheiro, M. (2023). Perceived barriers, drivers and enablers to becoming a foster family: An exploratory study in

Portugal. *Children and Youth Services Review*, *145*, 106811. https://doi.org/10.1016/j.childyouth.2023.106811

Antaramian, S. P., Huebner, E. S., Hills, K. J., & Valois, R. F. (2010). A dual-factor model of mental health: Toward a more comprehensive understanding of youth functioning. *American Journal of Orthopsychiatry*, *80*(4), 462. https://psycnet.apa.org/doi/10.1111/j.1939-0025.2010.01049.x

Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, *16*(5), 427-454. https://doi.org/10.1007/BF02202939

Arslan, G. (2016). Psychological maltreatment, emotional and behavioral problems in adolescents: The mediating role of resilience and self-esteem. *Child Abuse & Neglect, 52*, 200–209. https://doi.org/10.1016/j.chiabu.2015.09.010.

Arslan, G. (2017). Psychological maltreatment, coping strategies, and mental health problems: A brief and effective measure of psychological maltreatment in adolescents. *Child Abuse & Neglect*, *68*, 96-106. https://doi.org/10.1016/j.chiabu.2017.03.023

Arslan, G., & Allen, K. A. (2022). Complete mental health in elementary school children: Understanding youth school functioning and adjustment. *Current Psychology*, *41*(3), 1174-1183. https://doi.org/10.1007/s12144-020-00628-0

Arteaga, A. B., & Del Valle, J. F. (2003). Social support networks of adolescents in residential childcare. A comparative analysis with normative population. *Psicothema, 15*(1), 136–142.

Assink, M., & Wibbelink, C. J. M. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology, 12*, 154–174. https://doi.org/10.20982/tqmp.12.3.p154

Assink, M., Van der Put, C. E., Hoeve, M., De Vries, S. L. A., Stams, G. J. J. M., & Oort, F. J. (2015). Risk factors for persistent delinquent behavior: A meta-analytic review. *Clinical Psychology Review, 42*, 47–61. https://doi.org/10.1016/j.cpr.2015.08.002

*Assouline, A. A. H., & 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*, 104761. https://doi.org/10.1016/j.childyouth.2020.104761

Attar-Schwartz, S. (2008). Emotional, behavioral, and social problems among Israeli children in residential care: A multi-level analysis. *Children and Youth Services Review*, *30*(2), 229-248. https://doi.org/10.1016/j.childyouth.2007.09.009

*Attar-Schwartz, S., & Fridman-Teutsch, A. (2018). Father support and adjustment difficulties among youth in residential care: The moderating role of peer victimization and gender. *American Journal of Orthopsychiatry*, *88*(6), 701. https://psycnet.apa.org/doi/10.1037/ort0000287

*Attar-Schwartz, S., & Huri, Y. (2019). Grandparental support and life satisfaction among adolescents in residential care. *Children and Youth Services Review*, *96*, 70-78. https://psycnet.apa.org/doi/10.1016/j.childyouth.2018.11.033

Bailey, C., Klas, A., Cox, R., Bergmeier, H., Avery, J., & Skouteris, H. (2019). Systematic review of organisation-wide, trauma-informed care models in out-of-home care (OoHC) settings. *Health & Social Care in the Community*, *27*(3), e10-e22. https://doi.org/10.1111/hsc.12621

Ballespí, S., Vives, J., Sharp, C., Chanes, L., & Barrantes-Vidal, N. (2021). Self and other mentalizing polarities and dimensions of mental health: association with types of symptoms, functioning and well-being. *Frontiers in Psychology*, *12*, 566254. https://doi.org/10.3389/fpsyg.2021.566254

*Barendregt, C. S., Van der Laan, A. M., Bongers, I. L., & Van Nieuwenhuizen, C. (2015). Adolescents in secure residential care: the role of active and passive coping on general well-being and self-esteem. *European Child & Adolescent Psychiatry, 24*(7), 845-854. https://doi.org/10.1007/s00787-014-0629-5

Batki, A. (2018). The impact of early institutional care on emotion regulation: studying the play narratives of post-institutionalized and early adopted children. *Early Child Development and Care*, *188*(12), 1801-1815. https://doi.org/10.1080/03004430.2017.1289190

Beld, M. H. M., Kuiper, C. H. Z., Van Der Helm, G. H. P., De Swart, J. J. W., Stams, G. J. J. M., & Roest, J. J. (2021). Classroom climate, identification with school, and general self-worth predict academic self-concept in students attending residential schools for special education. *Residential Treatment for Children & Youth*, *38*(2), 137-152. https://doi.org/10.1080/0886571X.2019.1696262

Bell, T., & Romano, E. (2015). Child resilience in out-of-home care: Child welfare worker perspectives. *Children and Youth Services Review*, *48*, 49-59. https://doi.org/10.1016/j.childyouth.2014.12.008

*Bender, D., & Lösel, F. (1997). Protective and risk effects of peer relations and social support on antisocial behavior in adolescents from multi-problem milieus. *Journal of Adolescence, 20*(6), 661-678. https://doi.org/10.1006/jado.1997.0118

Bender, R., Friede, T., Koch, A., Kuss, O., Schlattmann, P., Schwarzer, G., & Skipka, G. (2018). Methods for evidence synthesis in the case of very few studies. *Research Synthesis Methods, 9*, 382-392. https://doi.org/10.1002/jrsm.1297

Bennett, J. M., Rohleder, N., & Sturmberg, J. P. (2018). Biopsychosocial approach to understanding resilience: Stress habituation and where to intervene. *Journal of Evaluation in Clinical Practice*, *24*(6), 1339-1346. https://doi.org/10.1111/jep.13052

Berg, E. A. (1948). A simple objective technique for measuring flexibility in thinking. *Journal of General Psychology, 39*(1), 15–12. https://doi.org/10.1080/00221309.1948.9918159

Bernedo, I. M., Salas, M. D., Fuentes, M. J., & García-Martín, M. A. (2014). Foster children's behavior problems and impulsivity in the family and school context. *Children and Youth Services Review, 42*, 43–49. https://doi.org/10.1016/j.childyouth.2014.03.022.

Bethell, C., Gombojav, N., Solloway, M., & Wissow, L. (2016). Adverse childhood experiences, resilience and mindfulness-based approaches: common denominator issues for children with emotional, mental, or behavioral problems. *Child and Adolescent Psychiatric Clinics*, *25*(2), 139-156. https://doi.org/10.1016/j.chc.2015.12.001

Bilson, A., & Baker, R. (1995). Parental contact with children fostered in residential care after the Children Act 1989. *British Journal of Social Work, 25*, 367−381. https://doi.org/10.1093/oxfordjournals.bjsw.a056185

Blaustein, M. E., & Kinniburgh, K. M. (2017). Attachment, self-regulation, and competency (ARC). *Evidence-Based Treatments for Trauma Related Disorders in Children and Adolescents*, 299-319. https://doi.org/10.1007/978-3-319-46138-0_14

Bonanno, G. A. (2008). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *Psychological Trauma: Theory, Research, Practice, and Policy, S*(1), 101–113. https://doi.org/10.1037/1942-9681.S.1.101

Bonanno, G. A., Romero, S. A., & Klein, S. I. (2015). The temporal elements of psychological resilience: An integrative framework for the study of individuals, families, and communities. *Psychological Inquiry*, *26*(2), 139-169. https://doi.org/10.1080/1047840X.2015.992677

Bonet, C., Palma, C., & Santos, G. G. (2020). Effectiveness of emotional intelligence therapy on suicide risk among adolescents in residential care. *International Journal of pPsychology*

and Psychological Therapy, *20*(1), 61-74. Retrieved from: https://dialnet.unirioja.es/servlet/articulo?codigo=7288618

Borenstein, M., Hegdes, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis.* Cornwall, UK: John Wiley & Sons.

Brend, D. M., & Sprang, G. (2020). Trauma-informed care in child welfare: An imperative for residential childcare workers. *International Journal of Child and Adolescent Resilience*, *7*(1), 154-165. https://doi.org/10.7202/1072595ar

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-cultural Psychology*, *1*(3), 185-216. https://doi.org/10.1177/135910457000100301

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513–531. https://psycnet.apa.org/doi/10.1037/0003-066X.32.7.513

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U., & Morris, P. (2006) *The bioecological model of human development*. In W. Damon & R. M. Lerner (Series Eds.) & R. M. Lerner (Vol. Ed.) *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6),793-828. New York: John Wiley.

Bukowski, W. M., Buhrmester, D., & Underwood, M. (2011). *Peer relationships as a developmental context*. In M. Underwood & L. Rosen (Eds.), Social development, 153–179. New York, NY: Guilford Press.

Butler, L. S., & Francis, E. (2014). *Resiliency differences between youth in community-based and residential treatment programs*: An exploratory analysis. In L. S. Butler, & E. Francis (Eds.). *Resilience Interventions for Youth in Diverse Populations*, 259–277. Springer.

Byrne, G., Murphy, S., & Connon, G. (2020). Mentalization-based treatments with children and families: A systematic review of the literature. *Clinical Child Psychology and Psychiatry*, *25*(4), 1022-1048. https://doi.org/10.1177/1359104520920689

Calcing, J., & Benetti, S. P. C. (2014). Caracterização da saúde mental em crianças e adolescentes em acolhimento institucional [Characterization of mental health in children and adolescents in institutional care]. *Psico*, *45*(4), 559-567. https://doi.org/10.15448/1980-8623.2014.4.13629

Calheiros, M. M., & Patrício, J. N. (2014). Assessment of needs in residential care: Perspectives of youth and professionals. *Journal of Child and Family Studies, 23*, 461-474. https://doi.org/10.1007/s10826-012-9702-1

Calheiros, M. M., Lopes, D., & Patrício, J. N. (2011). Assessment of the needs of youth in residential care: development and validation of an instrument. *Children and Youth Services Review*, *33*(10), 1930–1938. https://doi.org/10.1016/j.childyouth.2011.05.020.

Calheiros, M. M., Silva, C. S., & Magalhães, E. (2019). Child Maltreatment Severity Questionnaire (MSQ) for professionals: development, validity, and reliability evidence. *Assessment*. https://doi.org/10.1177/1073191119890030

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

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.

Camuñas, N., Vaíllo, M., Mavrou, I., Brígido, M., & Quintana, M. P. (2020). Cognitive and behavioral profile of minors in residential care: The role of executive functions. *Children and Youth Services Review*, *119,* 105507. https://doi.org/10.1016/j.childyouth.2020.105507

Cantwell, N., Davidson, J., Elsley, S., Milligan, I., & Quinn, N. (2012). *Moving forward: Implementing the 'guidelines for the alternative care of children'. Centre for Excellence for Looked After Children in Scotland*. Retrieved from: https://strathprints.strath.ac.uk/43093/1/Final_English_Version_of_Moving_Forward_Handbook.pdf

*Caserta, T. A., Punamäki, R-L., & Pirttilä-Backman, A-M. (2016). The buffering role of social support on the psychosocial wellbeing of orphans in Rwanda. *Social Development 26*(2) 402-422. https://doi.org/10.1111/sode.12188

Cheney, G., Schlösser, A., Nash, P., & Glover, L. (2014). Targeted group-based interventions in schools to promote emotional well-being: A systematic review. *Clinical Child Psychology and Psychiatry*, *19*(3), 412-438. https://doi.org/10.1177/1359104513489565

Cheung, M. W. L. (2014). Modeling dependent effect sizes with three-level meta-analyses: A structural equation modeling approach. *Psychological Methods, 19,* 211–229. https://doi.org/10.1037/a0032968

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Routledge. https://doi.org/10.4324/9780203771587

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310–357. https://psycnet.apa.org/doi/10.1037/0033-2909.98.2.310

Compas, B. E., Jaser, S. S., Bettis, A. H., Watson, K. H., Gruhn, M. A., Dunbar, J. P., ... & Thigpen, J. C. (2017). Coping, emotion regulation, and psychopathology in childhood and adolescence: A meta-analysis and narrative review. *Psychological Bulletin*, *143*(9), 939-991. https://psycnet.apa.org/doi/10.1037/bul0000110

Connolly, M., & Katz, I. (2019). Typologies of child protection systems: An international approach. *Child Abuse Review*, *28*(5), 381-394. https://doi.org/10.1002/car.2596

Cooke, A., Smith, D., & Booth, A. (2012). Beyond PICO: The SPIDER tool for qualitative evidence synthesis. *Qualitative Health Research*, *22,* 1435-1443. http://dx.doi.org/10.1177/1049732312452938.

Cooley, D. T., & Jackson, Y. (2022). Informant discrepancies in child maltreatment reporting: a systematic review. *Child Maltreatment, 27*(1), 126-145. https://doi.org/10.1177/1077559520966387

Cooper, H. (2010). *Research synthesis and meta-analysis*. Thousand Oaks, CA: Sage Publications.

*Cordovil, C., Crujo, M., Variça, P., & Calderia Da Silva, P. (2011). Resiliência em crianças e adolescentes institucionalizados. *Acta Médica Portuguesa*, *24.* https://doi.org/10.20344/amp.1473

Cotton, S., Zebracki, K., Rosenthal, S. L., Tsevat, J., & Drotar, D. (2006). Religion/spirituality and adolescent health outcomes: A review. *Journal of Adolescent Health, 38,* 472−480. https://doi.org/10.1016/j.jadohealth.2005.10.005

Creswell, J. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. London: Sage publications.

Culhane, S. E., & Taussig, H. N. (2009). The structure of problem behavior in a sample of maltreated youths. *Social Work Research, 33*(2), 70–78. https://doi.org/10.1093/swr/33.2.70

Dalmaso, E., Taylor, A., Whitham, J., Klassman, K., & Malvaso, C. (2024). Protective factors for externalising behaviour problems in children and adolescents living in out-of-home care: A systematic review. *Children and Youth Services Review*, 107998. https://doi.org/10.1016/j.childyouth.2024.107998

Del Valle, J. F. (2013). Out of home care in child protection: An international overview. *Psychosocial Intervention, 22*, 161–162. https://doi.org/10.5093/in2013a19

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

Delgado, P., Carvalho, J., & Correia, F. (2019). Viver em acolhimento familiar ou residencial: O bem-estar subjetivo de adolescentes em Portugal. *Psicoperspectivas, 18*(2), 86-97.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment. 49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13

*Dinisman, T., & Zeira, A. (2011). The contribution of individual, social support, and institutional characteristics to perceived readiness to leave care in Israel: An ecological perspective. *British Journal of Social Work*, *41*(8), 1442-1458. https://doi.org/10.1093/bjsw/bcr034

Doek, J. (2014). *Child well-being: Children's rights perspective.* In A. Ben-Arieh, F. Casas, I. Frønes, & J. Korbin (Eds.), *Handbook of child well-being*, 187–217. Dordrecht: Springer Netherlands.

Doerfler, L. A., Toscano, P. F., & 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*(1), 112-122. https://doi.org/10.1007/s10826-008-9212-3

Dosil, M., Jaureguizar, J., & Bernaras, E. (2022). Dating violence in adolescents in residential care: Frequency and associated factors. *Child & Family Social Work*, *27*(2), 311-323. https://doi.org/10.1111/cfs.12886

Drapeau, S., Saint-Jacques, M. C., Lepine, R., Be´gin, G., & Bernard, M. (2007). Processes that contribute to resilience among youth in foster care. *Journal of Adolescence, 30*(6) 977-999. http://dx.doi.org/10.1016/j.adolescence.2007.01.005.

Durkin, K. (1995). *Developmental social psychology: From infancy to old age.* Oxford, England: Blackwell.

Duval, S. J. (2005). *The trim and fill method.* In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.). Publication bias in meta-analysis: Prevention, assessment, and adjustments, 127–144. Chichester, England: Wiley. http://dx.doi.org/dx.doi.org/10.1002/0470870168

*Dutta, S. (2018). Preparation for social reintegration among young girls in residential care in India. *International Journal of Child, Youth and Family Studies*, *9*(2), 151-170. https://doi.org/10.18357/ijcyfs92201818217

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of advanced nursing*, *62*(1), 107-115. https://doi.org/10.1111/j.1365-2648.2007.04569.x

*Erol, N., Simsek, Z., & Münir, K. (2010). Mental health of adolescents reared in institutional care in Turkey: challenges and hope in the twenty-first century. *European Child & Adolescent Psychiatry*, *19*(2), 113-124. https://doi.org/10.1007/s00787-009-0047-2

Fernández-Artamendi, S., Águila-Otero, A., Del Valle, J. F., & Bravo, A. (2020). Victimization and substance use among adolescents in residential childcare. *Child Abuse & Neglect, 104*, 104484. https://doi.org/10.1016/j.chiabu.2020.104484

Ferreira, S., Magalhães, E., & Prioste, A. (2020). Social support and mental health of young people in residential care: A qualitative study. *Anuário de Psicologia Jurídica, 30*(1), 29-34.

Figueiredo, T., & Machado, T. S. (2010). Representação da vinculação a pais, pares e professores-estudos preliminares do IPPA-R para crianças do ensino básico [Representation of attachment to parents, peers and teachers - preliminary studies of the IPPA-R for primary school children] *I Seminário Internacional" Contributos da Psicologia em Contextos Educativos*", 1384-1398. ISBN- 978-972-8746-87-2.

Finkelhor, D., Hamby, S., Turner, H., & Ormrod, R. (2011). *The Juvenile Victimization Questionnaire: 2nd Revision (JVQ-R2).* Durham, NH: Crimes Against Children Research Center. Retrieved from: https://www.unh.edu/ccrc/sites/default/files/media/2022-03/screener-sum-version-youth-past-year.pdf

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2009). Lifetime assessment of poly-victimization in a national sample of children and youth. *Child Abuse & Neglect,* 33, 403–433. https://doi.org/10.1016/j.chiabu.2008.09.012.

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

Fonagy, P., Luyten, P., Moulton-Perkins, A., Lee, Y. W., Warren, F., Howard, S., ... & Lowyck, B. (2016). Development and validation of a self-report measure of mentalizing: The reflective functioning questionnaire. *PloS One*, *11*(7), e0158678. https://doi.org/10.1371/journal.pone.0158678

Fowler, P. J., Tompsett, C. J., Braciszewski, J. M., Jacques-Tiura, A. J., & Baltes, B. B. (2009). Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Development and Psychopathology, 21*, 227– 259. https://doi.org/10.1017/S0954579409000145.

Fritz, J., De Graaff, A. M., & Caisley, H. (2018). A systematic review of amenable resilience factors that moderate and/or mediate the relationship between childhood adversity and mental health in young people. *Frontiers in Psychiatry*, *9*, 341825. https://doi.org/10.3389/fpsyt.2018.00230

Gambin, M., Woźniak-Prus, M., Konecka, A., & Sharp, C. (2021). Relations between attachment to mother and father, mentalizing abilities and emotion regulation in adolescents. *European Journal of Developmental Psychology*, *18*(1), 18-37. https://doi.org/10.1080/17405629.2020.1736030

Gander, T., Boonmann, C., Fegert, J. M., Kölch, M., Schmeck, K., Di Gallo, A., ... & Schmid, M. (2019). Predictive factors for changes in quality of life among children and adolescents in youth welfare institutions. *Social Psychiatry and Psychiatric Epidemiology, 54*(12), 1575-1586. https://doi.org/10.1007/s00127-019-01724-8

Garmezy, N., Masten, A. S. & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopathology. *Child Development, 55*, 97-111. https://doi.org/10.2307/1129837

Gearing, R. E., Brewer, K. B., Elkins, J., Ibrahim, R. W., MacKenzie, M. J., & Schwalbe, C. S. J. (2015). Prevalence and correlates of depression, posttraumatic stress disorder, and suicidality in Jordanian youth in institutional care. *The Journal of Nervous and Mental Disease, 203*(3), 175–181.

Geurts, E. M., Boddy, J., Noom, M. J., & Knorth, E. J. (2012). Family-centred residential care: The new reality? *Child & Family Social Work*, *17*(2), 170-179. https://doi.org/10.1111/j.1365-2206.2012.00838.x

Goldstein, S., & Brooks, R. B. (2005). *Resilience in children*. New York: Springer.

Goldstein, S., & Brooks, R. B. (Eds.). (2013). *Handbook of resilience in children*. Springer Nature.

Gooding, HC, Milliren, CE, Austin, SB, Sheridan, MA, & McLaughlin, KA (2016). Child abuse, resting blood pressure, and blood pressure reactivity to psychological stress. *Journal of Pediatric Psychology, 41*, 5-12.

Gonzalez-Mendez, R., Ramírez-Santana, G., & Hamby, S. (2021). Analyzing Spanish adolescents through the lens of the Resilience Portfolio Model. *Journal of Interpersonal Violence*, *36*(9-10), 4472-4489. https://doi.org/10.1177/0886260518790600

Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child & 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

Gruhn, M. A., & Compas, B. E. (2020). Effects of maltreatment on coping and emotion regulation in childhood and adolescence: A meta-analytic review. *Child Abuse & Neglect*, *103*, 104446. https://doi.org/10.1016/j.chiabu.2020.104446

Grych, J., Hamby, S., & Banyard, V. (2015). The resilience portfolio model: Understanding healthy adaptation in victims of violence. *Psychology of Violence, 5*(4), 343. https://psycnet.apa.org/doi/10.1037/a0039671

Grych, J., Taylor, E., Banyard, V., & Hamby, S. (2020). Applying the dual factor model of mental health to understanding protective factors in adolescence. *American Journal of Orthopsychiatry*, *90*(4), 458. http://dx.doi.org/10.1037/ort0000449

Guba, E., & Lincoln, Y. (1994). *Compelling paradigms in qualitative research.* In N. K. Denzin and Y.S. Lincoln (eds.), Handbook of Qualitative Research. 105-117). London: Thousand Oaks: SAGE Publications.

Guerra, P. (2016). *Lei Proteção de Crianças e Jovens Em Perigo Anotada*. [Protection of Children and Youth at Risk Annotated Law]. Almedina.

Gullone, E., Jones, T., & Cummins, R. (2000). Coping styles and prison experience as predictors of psychological well-being in male prisoners. *Psychiatry, Psychology and Law, 7*(2), 170-181. https://doi.org/10.1080/13218710009524983

Gunnar, M. R., DePasquale, C. E., Reid, B. M., Donzella, B., & Miller, B. S. (2019). Pubertal stress recalibration reverses the effects of early life stress in pos-institutionalized children. *Proceedings of the National Academy of Sciences*, *116*(48), 23984-23988. https://doi.org/10.1073/pnas.1909699116

Gutterswijk, R. V., Kuiper, C. H., van der Horst, F. C., Jongerling, J., Harder, A. T., & Prinzie, P. (2023). 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

Gwenzi, G. D. (2019). The transition from institutional care to adulthood and independence: A social services professional and institutional caregiver perspective in Harare, Zimbabwe. *Child Care in Practice*, *25*(3), 248-262. https://doi.org/10.1080/13575279.2017.1414034

Hambrick, E. P., Tunno, A. M., Gabrielli, J., Jackson, Y., & Belz, C. (2014). Using multiple informants to assess child maltreatment: Concordance between case file and youth self-report. *Journal of Aggression, Maltreatment & Trauma, 23*(7), 751-771. https://doi.org/10.1080/10926771.2014.933463

Hamby, S., Finkelhor, D., Ormrod, R., & Turner, H. (2011). Juvenile Victimization Questionnaire-2nd Revision (JVQ-R2).

Hamby, S., Grych, J., & Banyard, V. (2018). Resilience portfolios and poly-strengths: Identifying protective factors associated with thriving after adversity. *Psychology of Violence*, *8*(2), 172. https://psycnet.apa.org/doi/10.1037/vio0000135

Hass, M., & Graydon, K. (2009). Sources of resiliency among successful foster youth. *Children and Youth Services Review*, *31*(4), 457-463. https://doi.org/10.1016/j.childyouth.2008.10.001

Heaton, R. K., Chelune, G. J., Talley, J. L., Kay, G. G., & Curtiss, G. (2009). *Wisconsin Card Sorting Test: Manual* (3st ed.). Psychological Assessment Resources.

Hébert, S. T., Esposito, T., & Hélie, S. (2018). How short-term placements affect placement trajectories: A propensity-weighted analysis of re-entry into care. *Children and Youth Services Review, 95*, 117–124. https://doi.org/10.1016/j.childyouth.2018.10.032

Hetherington, R. (2002). Learning from difference: Comparing child welfare systems. Retrieved from: https://scholars.wlu.ca/cgi/viewcontent.cgi?article=1016&context=pcfp

Holt, S., Buckley, H., & Whelan, S. (2008). The impact of exposure to domestic violence on children and young people: A review of the literature. *Child Abuse & Neglect*, *32*(8), 797-810. https://doi.org/10.1016/j.chiabu.2008.02.004

Hope, A., & Timmel, S. (1995). *Training for transformation, a handbook for community workers*, 1–3. Nairobi: Gweru Mambo Press.

Huber, M., Knottnerus, J. A., Green, L., Van Der Horst, H., Jadad, A. R., Kromhout, D., ... & Smid, H. (2011). How should we define health? *Bmj*, *343*. https://doi.org/10.1136/bmj.d4163

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
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
Infante, F. (2005). A resiliência como processo: uma revisão da literatura recente. *Resiliência: descobrindo as próprias fortalezas*, 23-38

ISS (2023). CASA 2022 - *Relatório de Caracterização Anual da Situação de Acolhimento das Crianças e Jovens*. Lisboa: Instituto de Segurança Social [Annual Characterization Report of the Residential Care Situation of Children and Young People. Lisbon: Social Security Institute]. Retrieved from: https://www.segsocial.pt/documents/10152/13200/Relatório+CASA+2022/c1d7359c-0c75-4aae-b916-3980070d4471

ISS (2024). CASA 2023 - *Relatório de Caracterização Anual da Situação de Acolhimento das Crianças e Jovens*. Lisboa: Instituto de Segurança Social [Annual Characterization Report of the Residential Care Situation of Children and Young People. Lisbon: Social Security Institute]. Retrieved from: https://www.segsocial.pt/documents/10152/13326/Relatório_CASA_2023/da8913ce-97e0-4b5d-ae10-bf16c7a88901

Izzo, C. V., Smith, E. G., Sellers, D. E., Holden, M. J., & Nunno, M. A. (2020). Improving relationship quality in group care settings: The impact of implementing the CARE model. *Children and Youth Services Review, 109*, 104623. https://doi.org/10.1016/j.childyouth.2019.104623

James, S. (2017). Implementing evidence-based practice in residential care: How far have we come? *Residential Treatment for Children & Youth*, *34*(2), 155-175. https://doi.org/10.1080/0886571X.2017.1332330

James, S., Wilczek, L., Kilian, J., Timonen-Kallio, E., Bravo, A., del Valle, J. F., ... & Rigamonti, A. (2022). A comparative analysis of residential care: A five-country multiple case-design study. *Child & Youth Care Forum 51*(6), 1031-1062. https://doi.org/10.1007/s10566-021-09666-6

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

Jiang, X. U., Huebner, E. S., & Hills, K. J. (2013). Parent attachment and early adolescents' life satisfaction: the mediating effect of hope. *Psychology in the Schools*, *50*(4), 340-352. https://doi.org/10.1002/pits.21680

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *33*(7), 14-26. https://doi.org/10.3102/0013189X033007014

Jones, R., Everson-Hock, E. S., Papaioannou, D., Guillaume, L., Goyder, E., Chilcott, J., Swann, C. (2011). Factors associated with outcomes for looked-after children and young people: A correlates review of the literature: Looked-after children and young people: Factors and outcomes. *Child: Care, Health and Development, 37*(5), 613–622. http://dx.doi.org/10.1111/j.1365-2214.2011.01226.x.

Jordan, N., Leon, S. C., Epstein, R. A., Durkin, E., Helgerson, J., & Lakin-Starr, B. L. (2009). Effect of organizational climate on youth outcomes in residential treatment. *Residential Treatment for Children & Youth, 26*(3), 194–208. https://doi.org/10.1080/08865710903130277

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

Kaplan, H. B. (1999). *Toward an understanding of resilience: A critical review of definitions and models.* In M. D. Glantz & J. L. Johnson (Orgs.), Resilience and development. Positive life adaptations, 17-83. New York: Plenum Press.

Kaplow, J. B., Rolon-Arroyo, B., Layne, C. M., Rooney, E., Oosterhoff, B., Hill, R., Steinberg, A. M., Lotterman, J., Gallagher, K., & Pynoos, R. S. (2020). Validation of the UCLA PTSD Reaction Index for DSM-5: a developmentally informed assessment tool for youth. *Journal of the American Academy of Child and Adolescent Psychiatry, 59*(1), 186–194. https://doi.org/10.1016/j.jaac. 2018.10.019

Kirk, R., & Day, A. (2011). Increasing college access for youth aging out of foster care: Evaluation of a summer camp program for foster youth transitioning from high school to college. *Children and Youth Services Review, 33*, 1173–1180. https://doi.org/10.1016/j.childyouth.2011.02.018

Knapp, G., & Hartung, J. (2003). Improved tests for a random effects meta-regression with a single covariate. *Statistics in Medicine, 22,* 2693–2710. https://doi.org/10.1002/sim.1482

Knight, C. (2015). Trauma-informed social work practice: Practice considerations and challenges. *Clinical Social Work Journal*, *43*, 25-37. https://doi.org/10.1007/s10615-014-0481-6

Kobak, R., Cassidy, J., Lyons-Ruth, K., & Ziv, Y. (2015). Attachment, stress, and psychopathology: A developmental pathways model. *Developmental psychopathology: Volume one: Theory and Method*, 333-369. https://doi.org/10.1002/9780470939383.ch10

Kruger, L., & Prinsloo, H. (2008). The appraisal and enhancement of resilience modalities in middle adolescents withing the school context. *South African Journal of Education, 28*(2), 241-260. https://hdl.handle.net/10520/EJC32159

Kumakech, E., Cantor-Graae, E., Maling, S., & Bajunirwe, F. (2009). Peer-group support intervention improves the psychosocial well-being of AIDS orphans: Cluster randomized trial. *Social Science & Medicine, 68*, 1038–1043. https://doi.org/10.1016/j.socscimed.2008.10.033

Lakey, B., & Cohen, S. (2000). *Social support theory and measurement*. In S. Cohen, L. Underwood & B. Gottlieb (Eds.). Measuring and intervening in social support. New York: Oxford University Press.

Lam, C. B., McHale, S. M., & Crouter, A. C. (2014). Time with peers from middle childhood to late adolescence: Developmental course and adjustment correlates. *Child Development, 85*(4), 1677-1693. https://doi.org/10.1111/cdev.12235

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics, 33*, 159–174. https://doi.org/10.2307/2529310

Law No. 147/1999 of the Assembly of the Republic. (1999). *Republic Diary. Series I*, no204. https://diariodarepublica.pt/dr/detalhe/lei/147-1999-581619

Law No. 142/2015 of the Assembly of the Republic. (2015). *Republic Diary: Series I,* no175. https://diariodarepublica.pt/dr/detalhe/lei/142-2015-70215246

Law No. 23/2023 of the Assembly of the Republic. (2023). *Republic Diary: Series I*, no101. https://diariodarepublica.pt/dr/detalhe/lei/23-2023-213498832

Law No. 450/2023 of the Assembly of the Republic. (2023). *Republic Diary: Series I*, no246. https://diariodarepublica.pt/dr/detalhe/portaria/450-2023-812826259

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Lee, B. R., & Barth, R. P. (2011). Defining group care programs: An index of reporting standards. In *Child & Youth Care Forum 40*, 253-266. Springer US. https://doi.org/10.1007/s10566-011-9143-9

Leloux-Opmeer, H., Kuiper, C., Swaab, H., & Scholte, E. (2016). Characteristics of children in foster care, family-style group care, and residential care: A scoping review. *Journal of Child and Family Studies, 25*(8), 2357-2371. https://doi.org/10.1007/s10826-016-0418-5

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., … & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Journal of Clinical Epidemiology, 62*(10), e1-e34. https://doi.org/10.7326/0003-4819-151-4-200908180-00136

Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.

Liu, M., Sun, F., Zhang, S., Tan, S., Anderson, S., & Guo, J. (2020). Youth leaving institutional care in China: Stress, coping mechanisms, problematic behaviors, and social support. *Child and Adolescent Social Work Journal*, 1-11. https://doi.org/10.1007/s10560-020-00698-w

*Llosada-Gistau, J., Casas, F., & Montserrat, C. (2017). What matters in for the subjective well-being of children in care? *Child Indicators Research*, *10*, 735-760. https://doi.org/10.1007/s12187-016-9405-z

Lou, Y., Taylor, E. P., & Di Folco, S. (2018). Resilience and resilience factors in children in residential care: A systematic review. *Children and Youth Services Review, 89*, 83-92. https://doi.org/10.1016/j.childyouth.2018.04.010

Lukšík, I. (2018). Resilience of young people in residential care. *Journal of Social Service Research*, *44*(5), 714-729. https://doi.org/10.1080/01488376.2018.1479336

Luthar, S. S. & Brown, P. J. (2007). Maximizing resilience through diverse levels of inquiry: Prevailing paradigms, possibilities, and priorities for the future. *Development and Psychopathology, 19*, 931-955. https://doi.org/10.1017/S0954579407000454

Luthar, S. S. & Cushing, G. (1999). *Measurement issues in the empirical study of resilience: An overview.* In M. D. Glantz & J. L. Johnson (Orgs.), Resilience and development: Positive life adaptations, 129-160. New York: Plenum Press.

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*, 543–562. https://doi.org/10.1111/1467-8624.00164

Luthar, S. S. (2006). *Resilience in development: A synthesis of research across ve decades.* In D. Cicchetti & D. J. Cohen (Eds.), Developmental psychopathology, *3. Risk, disorder, and adaptation* (2nd ed. 739–795). Hoboken, NJ: Wiley.

Magalhães, E. (2008). Experiências de vitimação: Estudo exploratório com crianças e adolescentes. [Victimization experiences: Exploratory study with children and adolescents] Unpublished Master's Dissertation. Universidade do Minho, Braga, Portugal.

Magalhães, E. (2024). Dual-factor models of mental health: A systematic review of empirical evidence. *Psychosocial Intervention.* https://doi.org/10.5093/pi2024a6

*Magalhães, E., & Calheiros, M. M. (2017). A dual-factor model of mental health and social support: Evidence with adolescents in residential care. *Children and Youth Services Review, 79*, 442–449. https://doi.org/10.1016/j.childyouth.2017.06.041

*Magalhães, E., & Calheiros, M. M. (2020). Why place matters in residential care: The mediating role of place attachment in the relation between adolescents' rights and psychological well-being. *Child Indicators Research*, 1–21. https://doi.org/10.1007/s12187-019-09716-5

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://dx.doi.org/10.5093/ejpalc2023a10

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., Calheiros, M. M., Costa, P., & Ferreira, S. (2021a). Youth's rights and mental health: The role of supportive relations in care. *Journal of Social and Personal Relationships, 38*(3), 848–864. https://doi.org/10.1177/0265407520975507

Magalhães, E., Ferreira, M., Ornelas, S., Silva, C. S., Camilo, C., & Calheiros, M. M. (2023). The youth-caregiver relationship quality in residential youth care: Professionals' perceptions and experiences. *Journal of Social and Personal Relationships*, 02654075231215824. https://doi.org/10.1177/02654075231215824

Magalhães, E., Grych, J., Ferreira, C., Antunes, C., Prioste, A., & Jongenelen, I. (2021b). Interpersonal Violence and Mental Health Outcomes: Mediation by Self-efficacy and Coping. *Victims & Offenders*, 1-17. https://doi.org/10.1080/15564886.2021.1880508

Magalhães, E., Pinheiro, M., & Calheiros, M. M. (2022). Participation of Young People in Residential Care: Professionals' Perceptions About Barriers and Facilitators in Portugal.

In *Children's Rights to Participate in Out-of-Home Care*, 115-131. Routledge. https://dx.doi.org/10.4324/9781003319368

*Makanui, K. P., Jackson, Y., & Gusler, S. (2019). Spirituality and its relation to mental health outcomes: An examination of youth in foster care. *Psychology of Religion and Spirituality*, *11*(3), 203-213. https://psycnet.apa.org/doi/10.1037/rel0000184

*Malindi, M. J., & MacHenjedze, N. (2012). The role of school engagement in strengthening Resilience among male street children. *South African Journal of Psychology, 42*(1), 71-81. https://hdl.handle.net/10520/EJC98676

Marriott, C., Hamilton-Giachritsis, C., & Harrop, C. (2014). Factors promoting resilience following childhood sexual abuse: A structured, narrative review of the literature. *Child Abuse Review, 23*, 17–34. https://doi.org/10.1002/car.2258.

Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, *2*(4), 425-444. https://doi.org/10.1017/S0954579400005812

Masten, A. S. (1999). *Commentary: The promise and perils of resilience research as a guide to preventive interventions.* In M. D. Glantz & J. L. Johnson (Orgs.), Resilience and development. Positive life adaptations, 251-259. New York: Plenum Press.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist, 56*(3), 227–238. http://dx.doi.org/10.1037/0003-066X.56.3.227.

Masten, A. S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology, 23,* 141–154. https://doi.org/10.1017/S0954579411000198

Masten, A. S. (2012). Resilience in children: Vintage Rutter and beyond. In A. Slater & P. Quinn (Eds.), *Developmental psychology: Revisiting the Classic Studies*, 204–221. London, UK: Sage.

Masten, A. S. (2014). Global perspectives on resilience in children and youth. *Child development, 85*(1), 6-20. https://doi.org/10.1111/cdev.12205

Masten, A. S., & Narayan, A. J. (2012). Child development in the context of disaster, war, and terrorism: Pathways of risk and resilience. *Annual Review of Psychology*, *63*(1), 227-257. https://doi.org/10.1146/annurev-psych-120710-100356

Masten, A. S. & Reed, J. M. (2002). *Resilience in development*. Handbook of Positive Psychology, 74-88. Oxford University Press.

*Maurović, I., Križanić, V., & Klasić, P. (2014). From risk to happiness: the resilience of adolescents in residential care. *Kriminologija & Socijalna Integracija: Casopis za Kriminologiju, Penologiju i Poremećaje u Ponašanju, 22*(2), 25-47. Retrivied from: https://heinonline.org/HOL/LandingPage?handle=hein.journals/crmsoint22&div=19&id=&page=

Mazza, J. J., & Overstreet, S. (2000). Children and adolescents exposed to community violence: A mental health perspective for school psychologists. *School Psychology Review,* 29, 86–101. https://doi.org/10.1080/02796015.2000.12085999

Mazzone, A., Nocentini, A., & Menesini, E. (2018). Bullying and peer violence among children and adolescents in residential care settings: A review of the literature. *Aggression and Violent Behavior, 38*, 101-112. https://doi.org/10.1016/j.avb.2017.12.004

McCabe, P. C., & Altamura, M. (2011). Empirically valid strategies to improve social and emotional competence of preschool children. *Psychology in the Schools, 48*, 513–540. https://doi.org/10.1002/pits.20570

Miles, S., Howlett, C. A., Berryman, C., Nedeljkovic, M., Moseley, G. L., & Phillipou, A. (2021). Considerations for using the Wisconsin Card Sorting Test to assess cognitive flexibility. *Behavior Research Methods*, *53*(5), 2083-2091. https://doi.org/10.3758/s13428-021-01551-3

*Mishra, R., & Sondhi, V. (2019). Fostering Resilience among Orphaned Adolescents through Institutional Care in India. *Residential Treatment for Children & Youth*, *36*(4), 314-337. https://doi.org/10.1080/0886571X.2018.1535286

Moore, T., McArthur, M., Death, J., Tilbury, C., & Roche, S. (2018). Sticking with us through it all: the importance of trustworthy relationships for children and young people in residential care. *Children and Youth Services Review*, *84*, 68–75. https://doi.org/10.1016/j.childyouth.2017.10.043

*Moreno-Manso, J. M., García-Baamonde, M., Guerrero-Barona, E., Godoy-Merino, M., Guerrero-Molina, M., & Barbosa-Torres, C. (2021). Externalizing and internalizing symptoms and coping strategies in young victims of abuse. *Current Psychology*, 1-10. https://doi.org/10.1007/s12144-021-01996-x

Mota, C. P., & Matos, P. M. (2010). Adolescentes institucionalizados: O papel das figuras significativas na predição da assertividade, empatia e autocontrolo. [Adolescence and institutionalization: The role of significant figures in the prediction of assertion, empathy and selfcontrol]. *Análise Psicológica*, *28*(2), 245–254. https://doi.org/10.14417/ap.278

Mota, C. P., & Matos, P. M. (2014). Adolescents in institutional care: Significant adults, resilience and well-being. In *Child & Youth Care Forum 44,* 209-224. Springer US. https://doi.org/10.1007/s10566-014-9278-6

Mota, C. P., & Matos, P. M. (2015). Adolescents in institutional care: Significant adults, resilience, and well-being. *Child & Youth Care Forum 44*(2), 209-224. Springer US. https://doi.org/10.1007/s10566-014-9278-6

*Mota, C. P., Costa, M., & Matos, P. M. (2016). Resilience and deviant behavior among institutionalized adolescents: The relationship with significant adults. *Child and Adolescent Social Work Journal*, *33*(4), 313-325. https://doi.org/10.1007/s10560-015-0429-x

Mota, C. P., Costa, M., & Matos, P. M. (2018). A escola e a instituição: relações significativas e o autoconceito de adolescentes em acolhimento residencial. [The school and the institution: significant relationships and the self-concept of adolescents in residential care]. *Revista Psicologia*, *32*(1), 87-100. https://doi.org/10.17575/rpsicol.v32i1.1277

Mulder, T. M., Kuiper, K. C., van der Put, C. E., Stams, G. J. M., & Assink, M. (2018). Risk factors for child neglect: A meta-analytic review. *Child Abuse & Neglect, 77*, 198–210. https://doi.org/10.1016/j.chiabu.2018.01.006

Munro, E. (2019). Decision-making under uncertainty in child protection: Creating a just and learning culture. *Child and Family Social Work, 24,* 123–130. https://doi.org/10.1111/cfs.12589

Murray, D. W., Rosanbalm, K., Christopoulos, C., & Meyer, A. L. (2019). An applied contextual model for promoting self-regulation enactment across development: Implications for prevention, public health and future research. *The Journal of Primary Prevention*, *40*, 367-403. https://doi.org/10.1007/s10935-019-00556-1

Neto, F. (1993). The satisfaction with life scale: Psychometrics properties in an adolescent sample. *Journal of Youth and Adolescence*, *22*(2), 125-134. https://doi.org/10.1007/BF01536648

*Nourian, M., Mohammadi Shahbolaghi, F., Nourozi Tabrizi, K., Rassouli, M., & Biglarrian, A. (2016). The lived experiences of resilience in Iranian adolescents living in residential care facilities: A hermeneutic phenomenological study. *International Journal of Qualitative Studies on Health and Well-being, 11*(1), 30485. https://doi.org/10.3402/qhw.v11.30485

Nunes, O., Brites, R., Pires, M., & Hipólito, J. (2014). Escala Toulousiana de Coping–reduzida. Manual técnico de utilização. *Escala Toulousiana de Coping–reduzida. Manual técnico de utilização*. [Toulousian Coping Scale–reduced. Technical user manual]. http://hdl.handle.net/11144/3022

*Ogińska-Bulik, N., & Kobylarczyk, M. (2015). Resiliency and social support as factors promoting the process of resilience in adolescents–wards of children's homes. *Health Psychology Report*, *3*(3), 210-219. https://doi.org/10.5114/hpr.2015.49045

Oliveira, C., Santos Almeida, C. R., & Hofheinz Giacomoni, C. (2022). School- based positive psychology interventions that promote well-being in children: A systematic review. *Child Indicators Research, 15*(5), 1583- 1600. https://doi.org/10.1007/s12187-022-09935-3

Oriol, X., Sala-Roca, J., & Filella, G. (2014). Emotional competences of adolescents in residential care: Analysis of emotional difficulties for intervention. *Children and Youth Services Review*, *44*, 334-340. https://doi.org/10.1016/j.childyouth.2014.06.009

*Ortúzar, H., Oriol, X., Miranda, R., & Montserrat, C. (2021). Teacher violence, school satisfaction and subjective well-being in children and adolescents in residential care: the moderation effect of staff support. *Children & Society*, *35*(6), 850-869. https://doi.org/10.1111/chso.12459

*Orúzar, H., Miranda, R., Oriol, X., & Montserrat, C. (2019). Self-control and subjective-wellbeing of adolescents in residential care: The moderator role of experienced happiness and daily-life activities with caregivers. *Children and Youth Services Review*, *98*, 125-131. https://doi.org/10.1016/j.childyouth.2018.12.021

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan-a web and mobile app for systematic reviews. *Systematic Reviews, 5*(1), 210.

Ozer, E. J., Lavi, I., Douglas, L., & Wolf, J. P. (2017). Protective factors for youth exposed to violence in their communities: A review of family, school, and community moderators. *Journal of Clinical Child & Adolescent Psychology, 46*, 353–378. https://doi.org/10.1080/15374416.2015.1046178.

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Systematic Reviews*, *10*(1), 1-11. https://doi.org/10.1186/s13643-021-01626-4

Parry, S., Cox, N., Andriopoulou, P., Oldfield, J., Roscoe, S., Palumbo-Haswell, J., & Collins, S. (2023). Mechanisms to enhance resilience and post-traumatic growth in residential care:

a narrative review. *Adversity and Resilience Science*, *4*(1), 1-21. https://doi.org/10.1007/s42844-022-00074-w

Pereira, M., Soares, I., Dias, P., Silva, J., Marques, S., & Baptista, J. (2010). Development, psychopathology, and attachment: An exploratory study with institutionalized children and their caregivers. *Psicologia, Reflexão e Crítica, 23*(2), 222. https://doi.org/10.1590/S0102-79722010000200004

Perlman, M. R., Dawson, A. E., Dardis, C. M., Egan, T., & Anderson, T. (2016). The association between childhood maltreatment and coping strategies: The indirect effect through attachment. *The Journal of Genetic Psychology*, *177*(5), 156-171. https://doi.org/10.1080/00221325.2016.1220912

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

Petrowski, N., Cappa, C., & Gross, P. (2017). Estimating the number of children in formal alternative care: Challenges and results. *Child Abuse & Neglect*, *70*, 388-398. https://doi.org/10.1016/j.chiabu.2016.11.026

Piko, B. F. & Hamvai, C. (2010). Parent, school and peer-related correlates of adolescents' life satisfaction. *Children and Youth Services Review, 32*(10), 1479-1482. https://doi.org/10.1016/j.childyouth.2010.07.007

*Pinchover, S., & Attar-Schwartz, S. (2014). Institutional social climate and adjustment difficulties of adolescents in residential care: The mediating role of victimization by peers. *Children and Youth Services Review*, *44*, 393-399. https://doi.org/10.1016/j.childyouth.2014.07.005

Pinheiro, M., Magalhães, E., & Baptista, J. (2021). Adolescents' resilience in residential care: A systematic review of factors related to healthy adaptation. *Child Indicators Research*, 1-19. https://doi.org/10.1007/s12187-021-09883-4

Pinheiro, M., Magalhães, E., & Baptista, J. (2024). Resilience in residential care: A qualitative study based on the voices of adolescents. *Children and Youth Services Review*, 107694. https://doi.org/10.1016/j.childyouth.2024.107694

Pinheiro, M., Magalhães, E., Calheiros, M. M., & Macdonald, D. (2022). Quality of Relationships Between Residential Staff and Youth: A Systematic Review. *Child and Adolescent Social Work Journal*, 1-16. https://doi.org/10.1007/s10560-022-00909-6

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Prussien, K. V., DeBaun, M. R., Yarboi, J., Bemis, H., McNally, C., Williams, E., & Compas, B. E. (2018). Cognitive function, coping, and depressive symptoms in children and adolescents with sickle cell disease. *Journal of Pediatric Psychology, 43*(5), 543-551. https://doi.org/10.1093/jpepsy/jsx141

Queiroz-Garcia, I., Espirito-Santo, H., & Pires, C. (2021). Psychometric properties of the Raven's Standard Progressive Matrices in a Portuguese sample. *Revista Portuguese Journal of Behavioral & Social Research, 7*(1), 84-101. https://doi.org/10.31211/rpics.2021.7.1.210

Quiroga, G., M., & Hamilton-Giachritsis, C. (2016). "Getting involved" a thematic analysis of caregivers' perspectives in Chilean residential children's homes. *Journal of Social and Personal Relationships*, *34*(3), 356–375. https://doi.org/10.1177/0265407516637838

*Quisenberry, C. M., & Foltz, R. (2013). Resilient youth in residential care. *Residential Treatment for Children & Youth, 30*(4), 280-293. https://doi.org/10.1080/0886571X.2013.852448

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. https://doi.org/10.1016/j.childyouth.2014.02.012

Ramos, C., Cabral, E., Serrão, V., Figueira, P., Santos, P. V., & Baptista, J. (2022). Psychometric Properties of the Parent-Report Version of the UCLA PTSD Reaction Index for DSM-5. *Journal of Child & Adolescent Trauma*, 1-11. https://doi.org/10.1007/s40653-021-00406-5

Raven, J., Raven, J. C., & Court, J. H. (2000). *Manual for Raven's Standard Progressive Matrices and Vocabulary Scales. Section 3: Progressive Standard Matrices*. Harcourt Assessment.

*Refaeli, T., Benbenishty, R., & Eliel-Gev, M. (2013). Youth aging out of residential care in Israel: Readiness for independent living and need for help. *Children and Youth Services Review*, *35*(9), 1601-1607. https://doi.org/10.1016/j.childyouth.2013.06.014

Rhodes, K., Cox, E. M., Orme, J. G., & Coakley, T. (2006). Foster parent's reasons for fostering and foster family utilization. *The Journal of Sociology & Social Welfare, 33*(4), 105-126.

Rice, M. E., & Harris, G. T. (2005). Comparing effect sizes in follow-up studies: ROC area, Cohen's d, and r. *Law and Human Behavior, 29,* 615–620. https://doi.org/10.1007/s10979-005-6832-7

Riley, P. (2011). *Attachment theory and the teacher–student relationship* (1st ed.). Oxon: Routdlege.

Roache, M., & Mc Sherry, D. (2021). Understanding and addressing child sexual exploitation (CSE) in residential care in Northern Ireland using a qualitative case study design: the residential social care worker perspective. *Child Abuse & Neglect, 122*, 105329. https://doi.org/10.1016/j.chiabu.2021.105329

Rodrigues, S., Barbosa-Ducharne, M., & Del Valle, J. F. (2013). The quality of residential childcare in Portugal and the example of its development in Spain. *Papeles del Psicólogo*, *34*(1), 11–22. Retrieved from: https://www.papelesdelpsicologo.es/English/2167.pdf

Rodrigues, S., Del Valle, J. F., & Barbosa-Ducharne, M. (2014). Differences and similarities in children's and caregivers' perspectives on the quality of residential care in Portugal. A first glance. *International Journal of Child & Family Welfare*, *15*(1-2), 24-37. Retrieved from: https://ugp.rug.nl/IJCFW/article/view/37855

Rodrigues, S., Barbosa-Ducharne, M., Del Valle, J. F., & Campos, J. (2019). Psychological adjustment of adolescents in residential care: comparative analysis of youth self-report/strengths and difficulties questionnaire. *Child and Adolescent Social Work Journal*, *36*(3), 247-258. https://doi.org/10.1007/s10560-019-00614-x

Russell, B. S., Lee, J. O., Spieker, S., & Oxford, M. L. (2016). Parenting and preschool self-regulation as predictors of social emotional competence in 1st grade. *Journal of Research in Childhood Education, 30*, 153–169. https://doi.org/10.1080/02568 543.2016.1143414

Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. *Annals of the Academy of Medicine, Singapore, 8*, 324-338.

*Santens, T., Claes, L., Diamond, G. S., & Bosmans, G. (2018). Depressive symptoms and self-harm among youngsters referred to child welfare: The role of trust in caregiver support and communication. *Child Abuse & Neglect*, *77*, 155-167. https://doi.org/10.1016/j.chiabu.2018.01.001

Schnittker, J. (2008): Happiness and Success: Genes, Families, and the Psychological Effects of Socioeconomic Position and Social Support. *American Journal of Sociology, 114,* 233–259.

*Segura, A., Pereda, N., Guilera, G., & Hamby, S. (2017). Resilience and psychopathology among victimized youth in residential care. *Child Abuse & Neglect, 72,* 301-311. https://doi.org/10.1016/j.chiabu.2017.08.019

Shean, M. (2015). Current theories relating to resilience and young people. *Victorian Health Promotion Foundation: Melbourne, Australia.*

*Sierau, S., Schneider, E., Nesterko, Y., & Glaesmer, H. (2019). Alone, but protected? Effects of social support on mental health of unaccompanied refugee minors. *European Child & Adolescent Psychiatry*, *28*(6), 769-780. https://doi.org/10.1007/s00787-018-1246-5

*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*, 1-23. https://doi.org/10.1111/apps.12339

*Sim, F., Li, D., & Chu, C. M. (2016). The moderating effect between strengths and placement on children's needs in out-of-home care: A follow-up study. *Children and Youth Services Review, 60*, 101–108. http://dx.doi.org/10.1016/j.childyouth.2015.11.012

*Simsek, Z., Erol, N., Öztop, D., & Münir, K. (2007). Prevalence and predictors of emotional and behavioral problems reported by teachers among institutionally reared children and adolescents in Turkish orphanages compared with community controls. *Children and Youth Services Review*, *29*(7), 883-899. https://doi.org/10.1016/j.childyouth.2007.01.004

*Singstad, M. T., Wallander, J. L., Greger, H. K., Lydersen, S., & Kayed, N. S. (2021). Perceived social support and quality of life among adolescents in residential youth care: a cross-sectional study. *Health and Quality of Life Outcomes*, *19*(1), 1-12. https://doi.org/10.1186/s12955-021-01676-1

Small, R. W., Bellonci, C., & Ramsey, S. (2014). Creating and maintaining family partnerships in residential treatment programs: Shared decisions, full participation, mutual responsibility. *Therapeutic Residential Care with Children and Youth: Developing Evidence-Based International Practice*, 156-171.

Sonderman, J., Bekken, F. F., Van der Helm, G. H. P., Roest, J. J., Kuiper, C. H. Z., Stams, G. J. J. M., & Van de Mheen, D. (2022). Peer interactions in residential youth care: A validation study of the Peer Interactions in Residential Youth Care (PIRY) Questionnaire. *Residential*

Treatment for Children & Youth, *39*(3), 239-260. https://doi.org/10.1080/0886571X.2020.1787924

Soriano-Díaz, C., Moreno-Manso, J. M., García-Baamonde, M. E., Guerrero-Molina, M., & Cantillo-Cordero, P. (2022). Behavioral and emotional difficulties and personal wellbeing of adolescents in residential care. *International Journal of Environmental Research and Public Health*, *20*(1), 256. https://doi.org/10.3390/ijerph20010256

Steinberg, A. M., Brymer, M. J., Kim, S., Briggs, E. C., Ghosh-Ippen, C., Ostrowski, S. A., Gully, K. J., & Pynoos, R. S. (2013). Psychometric properties of the UCLA PTSD reaction index: part I. *Journal of Traumatic Stress, 26*(1), 1–9. https://doi.org/10.1002/jts.21780

Suldo, S. M., Thalji, A., & Ferron, J. (2011). Longitudinal academic outcomes predicted by early adolescents' subjective well-being, psychopathology, and mental health status yielded from a dual-factor model. *The Journal of Positive Psychology, 6*(1), 17–30. https://doi.org/10.1080/17439760.2010.536774

Sulimani-Aidan, Y., & Benbenishty, R. (2011). Future expectations of adolescents in residential care in Israel. *Children and Youth Services Review*, *33*(7), 1134-1141. https://doi.org/10.1016/j.childyouth.2011.02.006

*Sulimani-Aidan, Y., & Tayri-Schwartz, T. (2021). The role of natural mentoring and sense of belonging in enhancing resilience among youth in care. *Children and Youth Services Review*, *120*, 105773. https://doi.org/10.1016/j.childyouth.2020.105773

*Sulimani-Aidan, Y., Melkman, E., & Greeson, J. K. (2020). The contribution of mentoring to the life skills of youth leaving care in Israel. *Child & Family Social Work*, *25*(2), 345-354. https://doi.org/10.1111/cfs.12690

Tang, E., H, A. D., Kuiper, C. H., & Harder, A. T. (2024). Family-centred practice and family outcomes in residential youth care: A systematic review. *Child & Family Social Work*. 1-17. https://doi.org/10.1111/cfs.13120

Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15,* 1–18. http://dx.doi.org/10.1207/s15327965pli1501_01.

*Tessier, N. G., O'Higgins, A., & Flynn, R. J. (2018). Neglect, educational success, and young people in out-of-home care: Cross-sectional and longitudinal analyses. *Child Abuse & Neglect*, *75*, 115-129. https://doi.org/10.1016/j.chiabu.2017.06.005

Thois, P. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior, 52*(2), 145–161. https://doi.org/10.1177/0022146510395592

Thompson, E. H., & Trice-Black, S. (2012). School-based group interventions for children exposed to domestic violence. *Journal of Family Violence*, *27*, 233-241. https://doi.org/10.1007/s10896-012-9416-6

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, *19*(6), 349-357. https://doi.org/10.1093/intqhc/mzm042

Underwood, L.A., Barretti, L., Storms, T.L. & Safonte-Strumolo, N. (2004). A review of clinical characteristics and residential treatments for adolescent delinquents with mental health disorders. A promising residential program. *Trauma, Violence & Abuse*, 5, 199–242. https://doi.org/10.1177/1524838004264344

Ungar, M. (2005). Pathways to resilience among children in child welfare, corrections, mental health and educational settings: Navigation and negotiation. *Child and Youth Care Forum 34*, 423-444. https://doi.org/10.1007/s10566-005-7755-7

Ungar, M. (2006). *Strengths-based counseling with at-risk youth*. Thousand Oaks, CA: Corwin Press.

Ungar, M. (2007). *Contextual and cultural aspects of resilience in child welfare settings.* Putting a human face on child welfare: Voices from the Prairies, 1-23.

Ungar, M., Ghazinour, M., & Richter, J. (2013). Annual Research Review: What is resilience within the social ecology of human development? *Journal of Child Psychology and Psychiatry, 54,*348–366. https://doi.org/10.1111/jcpp.12025

Ungar, M., & Theron, L. (2019). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet Psychiatry*, *7*(5), 441-448. https://doi.org/10.1016/S2215-0366(19)30434-1

Ungar, M., Theron, L., & Höltge, J. (2023). Multisystemic approaches to researching young people's resilience: Discovering culturally and contextually sensitive accounts of thriving under adversity. *Development and Psychopathology*, *35*(5), 2199-2213. https://doi.org/10.1017/S0954579423000469

United Nations General Assembly. (1989). Convention on the Rights of the Child. Retrieved from: https://www.ohchr.org/en/instrumentsmechanisms/instruments/convention-rights-child

Vella, S. L. C., & Pai, N. B. (2019). A theoretical review of psychological resilience: Defining resilience and resilience research over the decades. *Archives of Medicine and Health Sciences*, *7*(2), 233-239. http://dx.doi.org/10.4103/amhs.amhs_119_19

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software, 36,* 1–48. https://doi.org/10.18637/jss.v036.i03

Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement, 1*(2), 165178.

Westlake, M. F., Hillman, S., Kerr-Davis, A., Viziteu, A., Silver, M., & Dykiert, D. (2023). A systematic review and meta-analysis of the type and prevalence of mental health disorders and symptoms among children living in residential care. *Developmental Child Welfare*, *5*(4), 223-246. https://doi.org/10.1177/25161032231202256

Wemer, E. E., & Smith, R. S. (1979). An epidemiologic perspective on some antecedents and consequences of childhood mental health problems and learning disabilities. *Journal of the American Academy of Child Psychiatry*, *2*, 292-306.

Werner, E. E. (1997). Vulnerable but invincible: high-risk children from birth to adulthood. *Acta Pediátrica*, *86*(S422), 103-105. https://doi.org/10.1111/j.1651-2227.1997.tb18356.x

Whittaker, J. K., Holmes, L., Del Valle, J. F., Ainsworth, F., Andreassen, T., Anglin, J., ... & Zeira, A. (2016). Therapeutic residential care for children and youth: A consensus statement of the international work group on therapeutic residential care. *Residential Treatment for Children & Youth*, *33*(2), 89-106. https://doi.org/10.1080/0886571X.2016.1215755

Wright, M. O., Masten, A. S., & Narayan, A. J. (2013). *Resilience processes in development: Four waves of research on positive adaptation in the context of adversity.* In S. Goldstein & R. B. Brooks (Eds.), Handbook of Resilience in Children (2nd ed.), 15–37. New York, NY: Kluwer (Academic Plenum).

Wright, M. O. D., & Masten, A. S. (2015). *Pathways to resilience in context.* Youth Resilience and Culture*,* 3-22. Springer, Dordrecht.

Wright, M., Allbaugh, L., Askeland Price, C., & Bush, K. R. (2015). *Promoting Pathways to Resilient Outcomes for Maltreated Children. Families & Change: Coping With Stressful Events and Transitions, 223*.

Wright, H., Wellsted, D., Gratton, J., Besser, S. J., & Midgley, N. (2019). Use of the Strengths and Difficulties Questionnaire to identify treatment needs in looked-after children referred to CAMHS. *Developmental Child Welfare, 1*(2), 159–176. https://doi.org/10.1177/2516103218817555

Yu, L., & Chan, K. L. (2019). Moderating effects of personal strengths in the relationship between juvenile victimization and delinquent behaviors. *Child Abuse & Neglect, 93*, 79-90.

*Yendork, J. S., & Somhlaba, N. Z. (2014). Stress, coping and quality of life: An exploratory study of the psychological well-being of Ghanaian orphans placed in orphanages. *Children and Youth Services Review*, *46*, 28-37. https://doi.org/10.1016/j.childyouth.2014.07.025

Yule, K., Houston, J., & Grych, J. (2019). Resilience in children exposed to violence: A meta-analysis of protective factors across ecological contexts. *Clinical Child and Family Psychology Review, 22*(3), 406–431. https://doi.org/10.1007/s10567-019-00293-1

Zabern, A., & Bouteyre, E. (2018). Leading protective factors for children living out of home: A literature review. *Child & Family Social Work*, *23*(2), 324-335. https://doi.org/10.1111/cfs.12398

APPENDICES

Table 1S

Interview script for young people in residential care

	Theme block	Specific objectives	Questions	Notes for the interviewer (for further elaboration)
I.	Introduction	Identify the concepts of young people in residential care regarding the concept of resilience Identify resilient outcomes	If you were asked to explain what the concept of resilience is, what would you say? How do we realize that a young person who has experienced bad things is still well/resilient?	If the youth shows that they are not familiar with the concept of resilience, explain this concept succinctly. Definition of resilience to be used: *being resilient implies being subject to negative/bad situations and still developing well, being well.*
II.	Protective factors for resilient trajectories of young people in general population (not in care)	Identify individual and contextual factors for the positive adaptation and resilience of adolescents living not in residential care	When you think about a resilient young person, what do you think has contributed to his/her resilience?	If youth only focus on individual factors, ask for resources at the contextual level (at school, family, and other contexts) such as support relationships, etc.
III.	Protective factors of resilient trajectories of young people in residential care	Identification of protective factors for resilience of young people in residential care	When you think about a resilient young person in residential care, what do you think has contributed to his/her resilience?	If youth only focus on individual factors, or other contexts, ask about residential care factors Based on the youth's information, detail the process. Why is the factor important? In what way? How does it contribute to adaptation?

IV.	Protective factors for young people's adaptation interviewee (assets and resources, coping)	Identification of the meaningful protective factors for resilience outcomes of the adolescent interviewee	And for you? Regarding the factors you identified earlier, which are the most determinant factors for you?	
V.	End of the interview	Inform that the interview has come to an end Thank the young person for their collaboration	We are almost finished, in addition to everything we have talked about, would you like to say something? Do you have any questions or comments?	Debriefing

Table 2S

Thirty-two items checklist (COREQ) applied in the qualitative study with young people in residential care (Tong et al., 2007)

Domains and guide questions	Description
Domain 1: Research team and reflexivity	
Personal characteristics	
1. Interviewer/facilitator *"Which author conducted the interview?"*	The 1st author of the present study
2. Credentials *"What were the researcher's credentials?"*	PhD student
3. Occupation *"What was their occupation at the time of the study?"*	Full time PhD student with and individual scholarship
4. Gender *"Was the researcher male or female?"*	Female
5. Experience and training *"What experience or training did the researcher have?*	The researcher has training in qualitative methodologies
6. Relationship established *"Was a relationship established prior to study commencement?"*	No
7. Participant knowledge of the interviewer *"What did the participants know about the researcher?"*	The participants met the interviewer only at the time of data collection
8. Interviewer characteristics *"What characteristics were reported about the interviewer?"*	Interests in the research topic

Domain 2: Study design	
Theoretical framework	
9. Methodological orientation and theory *"What methodological orientation was stated to underpin the study? e.g., grounded theory, phenomenoly, content analysis"*	Content analysis
Participation selection	
10. Sampling *"How were participants selected?"*	Convenience sampling
11. Method of approach *"How were participants approached?"*	Face-to-face
12. Sample size *"How many participants were in the study?"*	19 participants
13. Non-participation *"How many participants dropped out?"*	2 participants
Setting	
14. Setting of data collection *"Where was the data collected?"*	Residential care setting
15. Presence of non-participants *"Was anyone else present besides the participants and researchers?"*	No
16. Description of sample "What are the important characteristics of the sample?"	19 adolescents in generalist residential care settings. Age between 12-17 years old, mostly male, and mostly Portuguese.
Data collection	
17. Interview guide *"Were questions, prompts, guides provided by the authors? Was it pilot tested?"*	Yes
18. Repeat interviews *"Were repeat interviews carried out? If yes, how many?"*	No

19. Audio/visual recording *"Did the research use audio or visual recording to collect the data?"*	Yes
20. Field notes *"Were field notes made during and/or after the interview or focus group?"*	No
21. Duration *"What was the duration of the interviews or focus group?"*	5 - 20 minutes
22. Data saturation *"Was data saturation discussed?"*	Yes (17 interviews)
23. Transcripts returned *"Were transcripts returned to participants for comment and/or correction?"*	No
Domain 3: Analysis and findings	
Data analysis	
24. Number of data coders *"How many data coders coded the data?"*	2
25. Description of the coding tree *"Did authors provide a description of the coding tree?"*	Yes
26. Derivation of the themes *"Were themes identified in advance or derived from the data?"*	Derived from the data
27. Software *"What software, if applicable, was used to manage the data?"*	MAXQDA software – version 22
28. Participating checking *"Did participants provide feedback on the findings?"*	No

Reporting	
29. Quotations presented *"Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g., participant number"*	Yes
30. Data and findings consistent *"Were there consistency between the data presented and the findings?"*	Yes
31. Clarity of major themes *"Were major themes clearly presented in the findings?"*	Yes
32. Clarity of minor themes *"Is there a description of diverse cases or discussion of minor themes?"*	Yes

Table 3S

Interview script for care workers in residential care

Theme block		Specific objectives	Questions	Notes for the interviewer (for further elaboration)
I.	Introduction	Identify the concepts of care worker in residential care regarding the concept of resilience Identify resilient outcomes	If you were asked to explain what the concept of resilience is, what would you say? How do we realize that a young person who has experienced bad things is still well/resilient?	If the care worker shows that she/he is not familiar with the concept of resilience, explain this concept succinctly. Definition of resilience to be used: *being resilient implies being subject to negative/bad situations and still developing well, being well.*
II.	Protective factors for resilient trajectories of young people in general population (not in care)	Identify individual and contextual factors for the positive adaptation and resilience of adolescents living not in residential care	When you think about a resilient young person, what do you think has contributed to his/her resilience?	If care worker only focuses on individual factors, ask for resources at the contextual level (at school, family, and other contexts) such as support relationships, etc.
III.	Protective factors of resilient trajectories of young people in residential care	Identification of protective factors for resilience of young people in residential care	When you think about a resilient young person in residential care, what do you think has contributed to his/her resilience?	If care worker only focuses on individual factors, or other contexts, ask about residential care factors. Based on the care worker's information, detail the process. Why is the factor important? In what way? How does it contribute to adaptation?

IV.	End of the interview	Inform that the interview has come to an end Thank the care worker for their collaboration	We are almost finished, in addition to everything we have talked about, would you like to say something? Do you have any questions or comments?	Debriefing

Table 4S

Thirty-two items checklist (COREQ) applied in the qualitative study with care workers in residential care in this study (Tong et al., 2007)

Domains and guide questions	Description
Domain 1: Research team and reflexivity	
Personal characteristics	
1. Interviewer/facilitator *"Which author conducted the interview?"*	The 1st author of the present study
2. Credentials *"What were the researcher's credentials?"*	PhD student
3. Occupation *"What was their occupation at the time of the study?"*	Full time PhD student with and individual scholarship
4. Gender *"Was the researcher male or female?"*	Female
5. Experience and training *"What experience or training did the researcher have?*	The researcher has training in qualitative methodologies
6. Relationship established *"Was a relationship established prior to study commencement?"*	No
7. Participant knowledge of the interviewer *"What did the participants know about the researcher?"*	The participants met the interviewer only at the time of data collection
8. Interviewer characteristics *"What characteristics were reported about the interviewer?"*	Interests in the research topic

Domain 2: Study design	
Theoretical framework	
9. Methodological orientation and theory *"What methodological orientation was stated to underpin the study? e.g., grounded theory, phenomenoly, content analysis"*	Content analysis
Participation selection	
10. Sampling *"How were participants selected?"*	Convenience sampling
11. Method of approach *"How were participants approached?"*	Face-to-face
12. Sample size *"How many participants were in the study?"*	15 participants
13. Non-participation *"How many participants dropped out?"*	No
Setting	
14. Setting of data collection *"Where was the data collected?"*	Residential care setting
15. Presence of non-participants *"Was anyone else present besides the participants and researchers?"*	No
16. Description of sample "What are the important characteristics of the sample?"	15 care workers in generalist residential care settings. Age between 23-51 years old, 100% female, and mostly Portuguese.
Data collection	
17. Interview guide *"Were questions, prompts, guides provided by the authors? Was it pilot tested?"*	Yes

18. Repeat interviews *"Were repeat interviews carried out? If yes, how many?"*	No
19. Audio/visual recording *"Did the research use audio or visual recording to collect the data?"*	Yes
20. Field notes *"Were field notes made during and/or after the interview or focus group?"*	No
21. Duration *"What was the duration of the interviews or focus group?"*	11 - 48 minutes
22. Data saturation *"Was data saturation discussed?"*	Yes (13 interviews)
23. Transcripts returned *"Were transcripts returned to participants for comment and/or correction?"*	No
Domain 3: Analysis and findings	
Data analysis	
24. Number of data coders *"How many data coders coded the data?"*	2
25. Description of the coding tree *"Did authors provide a description of the coding tree?"*	Yes
26. Derivation of the themes *"Were themes identified in advance or derived from the data?"*	Derived from the data
27. Software *"What software, if applicable, was used to manage the data?"*	MAXQDA software – version 22
28. Participating checking *"Did participants provide feedback on the findings?"*	No

Reporting	
29. Quotations presented *"Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g., participant number"*	Yes
30. Data and findings consistent *"Were there consistency between the data presented and the findings?"*	Yes
31. Clarity of major themes *"Were major themes clearly presented in the findings?"*	Yes
32. Clarity of minor themes *"Is there a description of diverse cases or discussion of minor themes?"*	Yes