Adolescents' resilience in residential care: a systematic review of factors related to healthy adaptation

Abstract

Research with young people in Residential Care (RC) has primarily focused on mental health problems, overlooking resilience and adaptation. Considering that we cannot change previous trauma experiences and adversity (e.g., previous abuse and neglect), 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. We expect 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

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., 2014; 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 et al., 2020;). Admission in 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 & Patricio, 2014; Ferreira et al., 2020; Magalhães & Calheiros, 2017; Magalhães et al., 2021). 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 (Josefiak et al., 2016) overlooking resilient trajectories (Butler & Francis, 2014; Lou et al., 2018; Sim et al., 2016). Considering that we cannot change previous trauma and adversity (e.g., previous abuse and neglect; Jones et al., 2011), 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 interactions 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 exposure 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 exposure to stressful life events (Tedeschi & Calhound, 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., 2021).

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 factors

(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 healthy 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 & MacMillian, 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 community 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, in the current systematic review we aim to contribute to this discussion about resilience in RC by updating the review of Lou et al. (2018) and addressing this concern about cross-over by adopting a specific and well-defined theoretical model to guide our 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.

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 psychological 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 1, 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.

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), we organized the outcomes 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, we found that 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.

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).

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).

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. We 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.

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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		