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A systematic review

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Positive Peer Relationships, Coping and Resilience in Young People in Alternative Care: A Systematic Review

Abstract

The positive impact for young people in alternative care of attachment relationships with adults is well documented. The potential role of peers in fulfilling attachment needs in this population warrants further investigation. This paper presents a systematic review of existing quantitative evidence exploring how positive peer relationships influence psychological variables related to coping and resilience in young people in alternative care. The review targeted literature relating to adolescents aged 10-18 living in alternative care. A systematic search of the literature for studies of psychological resilience-based variables and peer relationships led to the inclusion of 10 papers. An assessment of the studies using methodological quality ratings was conducted. Four key themes emerged: (1) Perceived satisfaction with peer relationships; (2) The impact of peer group networks; (3) Positive attachments in adolescence and; (4) The role of social skills. The findings highlight the need to investigate more positive outcomes using standardized measures for variables of resilience and peer attachment directly in this population. It summarizes the current evidence and lays the foundation for future robust longitudinal studies exploring peer relationships and resilience variables directly. It puts forward the need for a positive developmental rhetoric, drawn directly from the strengths of this group.

KEYWORDS:

adolescents; alternative care; resilience; peer; relationships

1.1 Definitions and Prevalence

‘Alternative care’ is used to describe children in any out-of-home care situation, including residential, foster and kinship care, based on the United Nations definition (SOS Children’s Villages International, 2010). It is difficult to accurately assess the number of children that fall into this category, with a recent review estimating approximately 2.7 million children globally (Petrowski, Cappaa & Gross, 2017). Research indicates this population disproportionately experiences adversity, with the majority of children in alternative care having been exposed to multiple traumatic experiences during childhood (Greeson et al., 2011; Simkiss, 2019; Turney & Wildeman, 2017). Long-term outcomes for this population remain poorer than their peers in areas including education (Department for Education, 2018), mental health (Blower, Addo, Hodgson, Lamington, & Towlson, 2004) and interpersonal functioning (Meadows, Tunstill, George & Kurtz, 2011).

1.2 Attachment Relationships with Adults

Early relational trauma can contribute to insecure attachment styles, with the potential for negative psychological impact in youth (e.g. Brumariu & Kerns, 2010; Rosenstein & Horowitz, 1996). However, attachment relationships also provide a setting within which early negative experiences can be resolved in the context of developmental tasks of adolescence (Rice, 1990). The role of positive adult relationships in promoting psychological health through attachment relationships is recognized in the literature (e.g. Strolin-Goltzman et al., 2016; The Care Enquiry, 2013b) and reflected in alternative care guidelines (e.g. The National Institute for Health and Care Excellence (NICE), 2017; The Care Enquiry, 2013a).

Predictable and healthy relationships can, over time, support children to redefine their internal working models, the templates they have developed to understand the world and others (Bowlby, 1969). Evidence has shown that alongside observable changes in behavior, sensitive and responsive caregiving can impact children at a biological level, reversing

abnormal stress hormone responses (Dozier et al, 2006). However, factors such as feeling let down by adults in the past (Bazalgette et al., 2015) can mean children who have experienced early adversity may find it difficult to fully trust or connect with safe adults. Wigley et al. (2011) suggested reasons for this include a recognition from young people that it is the paid job of the adult to be there for them, particularly in residential care settings; inconsistent care through, for example, placement changes reinforcing earlier experiences of loss and rejection; and a felt sense of powerlessness in influencing the decisions adults make about the young person's future.

1.3 An Argument for Peer Attachment

The necessity of attachment figures and the simultaneous obstacles to forming and sustaining attachment relationships with alternative caregivers suggests that peer relationships may provide an additional or alternative potential avenue through which young people can have their attachment needs met. Normative peer relationships are associated with adolescent resilience (Mann-Feder, 2018). Different positions defining resilience have been put forward (see Shean, 2015) but generally this concept is regarded as the demonstration of positive function or adaptation in response to adversity (Luthar, Cicchetti & Becker, 2000; Masten, 2001; Rutter, 2006). As such, resilience can be understood as a process related to protective characteristics such as self-esteem (Schofield & Beek, 2005), though it is often demonstrated in research with this population by the absence of negative outcomes (e.g. Shpiegel, 2016).

Longitudinal evidence has put forward that differentiated attachment styles to parents and friends are seen in adolescence (Doyle et al., 2009), suggesting that young people are able to relate in different ways to the people in their lives. Whilst developing and sustaining friendships is often more complex for young people in alternative care (Edmond, Auslander, Elze & Bowland, 2006; Rutman & Hubberstay, 2016), this population can make use of a

range of different people to meet their social, emotional and psychological needs, including other young people (McMahon & Curtin, 2013). Despite carers' concerns about social isolation, young people describe satisfying friendships overall (Blower et al., 2004) that, given the transient nature of other relationships in their life, are highly valued (Ridge & Millar, 2000). The potential influencing role of peer relationships on factors related to resilience is under-researched, and often only briefly referred to in reports and guidelines promoting the importance of satisfying relationships for this population (e.g. NICE, 2017).

An individual's peer group may act as either a risk or a protective factor depending on several factors (Aguilar-Vafaie et al., 2011; Leve, Fisher & Chamberlain, 2009). Negative characteristics (e.g. delinquency, substance misuse) are observed and researched in this population, and frequently associated with peer influence. Peer relationships are conceptualized as problematic, with resolution found in scaffolding caregivers, separating young people from their peers, and an under-emphasis on strengthened peer networks (e.g. Kim, Buchanan & Price, 2017; Hahn et al., 2005).

In response to criticism of over-focusing on negative outcomes, rather than on the interpersonal needs of young people (Coman & Devaney, 2011; Devaney, 2008), emerging research exploring resilience-based factors (i.e. what might be supporting young people to adapt to and manage adversity) is taking place. This has allowed for a better understanding as to why many children in alternative care, who experience high levels of adversity, demonstrate positive emotional, social and behavioral adjustment and that these occur through the same basic adaptational processes as for all young people (Masten, 2001).

Preliminary evidence highlights the importance of peer relationships in providing emotional (Hiles et al., 2013) and practical (Perez & Romo, 2011) support for care leavers. Although relationships with other young people in alternative care has been suggested to be problematic, young people also describe a closeness arising from their shared experiences,

particularly if they perceive an associated external stigma to their care status (Mann-Feder, 2018). Leve, Fisher & Chamberlain (2009) reported findings from randomized clinical trials investigating the impact of a strength-based intervention, which offered bespoke support to the system around the child with the aim of promoting resiliency in children and adolescents exposed to early adversity. They found that individuals who engaged in this program were more successful at forming positive peer relationships and that these peer relationships mediated the intervention effects on delinquency in both male and female samples. Similarly, Rogers (2017) found that in a context of feeling stigmatized and devalued, forming meaningful and supportive relationships with other fostered peers demonstrated an adaptive response, which served a protective function against negative factors.

1.4 Research Question

To the authors' knowledge there are no systematic reviews specifically examining the links between peer relationships and psychological variables related to resilience in a population of young people in alternative care. As such this review aims to address the following review question: How do positive peer relationships influence psychological variables related to coping and resilience in young people in alternative care?

2. Materials and Methods

2.1 Protocol

A review protocol, following PROSPERO guidance, can be accessed at http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42018085188.

2.1.1 Search terms. The literature search was conducted in July 2017 in two phases and updated in September 2019 (phase 3). Three databases; Ovid, ProQuest and Cinahl plus were used. The sources included, date parameters and number of studies found are summarized in Table 1. In phase one, the search terms "looked after" OR "foster care" OR

"residential care" OR "kinship care" were used to identify articles related to an alternative care population. The terms "children" OR "adolescents" OR "young*" OR "teen*" OR "youth" were used to capture research referring to young people in alternative care. The terms "attachment" OR "relationship*" OR "interpersonal" were used to capture interpersonal functioning. "Peer" was discarded from the search terms after initial searches produced large redundancy and no unique papers not captured by the other interpersonal terms. "Coping" OR "resilience" OR "protective" were used to represent positive psychological variables.

In phase two, population search terms were substituted by "alternative care" OR "out of home care" OR "care-experienced", to increase the scope of this review in identifying potential studies for inclusion. Some duplication was noted in this second phase, and therefore numbers retrieved at each stage are reported separately (see Figure 1). Phase 3 combined the terms used in phases 1 and 2 to provide an updated search in September 2019. No start date was used; papers could have been published at any time.

2.1.2 Eligibility criteria. The PICOS framework was used to develop criteria. Young people in alternative care within the age range of 10-18 years, or with a mean age within this range if the age range was not reported, were included. As studies with this population often explore resilience as the absence of negative factors, papers that looked at negative outcomes (e.g. delinquent behavior) but with the overall focus of the study related to understanding resilience factors, were included. This was in order to maximize the scope of this review to conduct an accurate assessment of the availability of literature currently addressing the research question. Studies that explored a possible association (direct or indirect) between peer relationships and resilience factors in this population were included. There were no a priori comparator groups. Theoretically, interpersonal variables were the intervention and resilience factors the outcome but, in practice, recognizing the lack of longitudinal evidence, temporal causality was not a pre-requisite. Resilience is a broad term operationalized in

diverse ways – in this review we interpreted it to include indicators of positive psychological functioning in the context of adversity including coping, social skills, self-esteem, wellbeing. Outcomes could be self-report, clinician-report, caregiver-report or a combination.

Publications were limited to peer reviewed journals articles and those with titles and abstracts published or translated to English. The review focused on studies that addressed the research question using quantitative methods.

2.2 Literature Search and Study Selection

The phase one search yielded 4,185 results, reduced to 3,155 following de-duplication. These were then screened by title, abstract and full text. Full text was screened out hierarchically, first for sampling issues, then methodical issues and finally for insufficient data to address the research question, leading to the final inclusion of ten articles. This process was repeated for phase two, which yielded 473 results, reduced to 458 results following de-duplication. Phase two led to the identification of one article, which had already been identified and included in phase one. Phase 3 did not identify any additional papers for inclusion.

2.3 Quality Assessment of Studies

PRISMA data extraction guidelines were followed (Moher et al., 2009). The full text of each article eligible for inclusion was read and relevant data was extracted, summarized and assessed. Quality criteria were developed using Scottish Intercollegiate Guidelines Network (2017) guidelines for cohort studies as a template. Given that studies in this review explored associations between variables and not interventions, adaptations were made to ensure quality criteria were appropriate and meaningful. This was done in consultation with published recommendations (Boland et al., 2014; Centre for Reviews and Dissemination, 2009; NICE, 2013). See Table 1 for a summary of quality ratings.

A selection of studies was co-rated by the second author and one independent reviewer, to reduce assessment bias. As part of this process, quality criteria were refined, and all studies reviewed using updated quality criteria. Co-ratings achieved 78% agreement ($k_w=0.58$; moderate; McHugh, 2012). Agreement between raters was sought for final reported quality ratings. Each quality criterion was assigned a category rating of Well Covered, Adequately Addressed or Insufficiently Addressed/Not Addressed. Had any quality criteria been rated as Not Known, attempts to contact the lead author for clarification would have been made for papers published in the last ten years.

3. Results

Methodology and reported findings of included studies are summarized in Table 2. Across all 10 studies, the total number of participants was 3036, of whom 55% were female. The age range was 11-18 years with a mean age of 15.77 years.

3.1 Overall Strengths and Limitations of Studies

As expected, variation in the methodological quality of studies was seen, as outlined in Table 1. Across the sample, studies were generally rated highly for research questions and data analysis and results (both well covered in six studies; adequately addressed in four studies). Generally, results related to research questions posed and appropriate statistical analysis was used to explore the data.

Issues of sampling bias were present to some degree in all papers. Although this was a weakness, the challenges of recruiting in this hard-to-reach population were acknowledged and quality criteria were adapted to allow for more sensitive ratings, leading to half the papers being defined as well covered. Maurović, Križanić and Klasić's (2014) study was especially weak in this area due to an overall lack of consideration and description of sampling issues.

In respect to assessment tools, bespoke measures were used in six studies (Bender & Lösel, 1997; Edmond et al., 2006; Lee & Thomson, 2009; Legault, Anawati & Flynn, 2006; Maurović, Križanić & Klasić, 2014; Perry, 2006). These were usually well-explained and developed based on existing measures, or had a clear theoretical reason for the development of items. Whilst levels of internal consistency were generally satisfactory, good external validation was not presented for any of the bespoke measures of interest in this review.

Issues with sampling impacted on generalizability. However, overall generalizability was well covered in four studies (Erol, Simesk & Münir, 2010; Legault, Anawati & Flynn., 2006; Merritt & Snyder, 2015; Perry, 2006), largely due to considered sampling methods meaning that findings had greater external validity. Only two of the studies used control groups (Erol, Simesk & Münir, 2010; Perry, 2006), one of which was unrelated to the question of this review (Erol, Simesk & Münir, 2010). All studies in this review were observational, with half the papers drawing their data from existing research (Edmond et al., 2006; Lee & Thomson, 2009; Legault, Anawati & Flynn., 2006; Merritt & Snyder, 2015; Perry, 2006). The predominance of cross-sectional design was a consistent weakness. Confounding factors were addressed in design and analysis in five studies (Edmond et al., 2006; Erol, Simesk & Münir, 2010; Legault, Anawati & Flynn., 2006; Merritt & Snyder, 2015; Perry, 2006). Two papers, while discussing confounding factors, failed to sufficiently account for these in analysis (Mota & Matos, 2013; Quisenberry & Foltz, 2013).

3.2 Promoting Resilience Based Research

All the papers included in this study acknowledged and critiqued other research for its focus on negative outcomes. Despite this, seven papers still adopted a measure of negative outcomes within their design, either partially (Edmond et al., 2006; Legault, Anawati & Flynn., 2006; Merritt & Snyder, 2015) or as the primary measure of outcome. These were in

relation to problem behavior (Bender & Lösel, 1997; Erol, Simesk & Münir, 2010; Lee & Thomson, 2009) and psychological distress (Perry, 2006).

Only three papers (Maurović, Križanić & Klasić, 2014; Mota & Matos, 2013; Quisenberry & Foltz, 2013) directly attempted to address this barrier in their methodological research design, focusing on more positive resilience-based outcomes only. Maurović, Križanić and Klasić (2014) suggest happiness and well-being to be an indicator of internal adjustment and predictor of future developmental outcomes and is thus utilized as a resilience-based measure in their study. Their results indicated that satisfaction with peers correlated significantly to happiness ($r=.33$, p -value not reported but significance indicated), though this was not found to be an individual predictor of happiness overall. Analysis of the structural equation model carried out by Mota and Matos (2013) demonstrated a positive effect of secure peer attachment on the psychological variables of self-esteem ($\beta=.23$, $p<.05$), social skills ($\beta=.59$, $p<.05$) and a mediated effect on active coping ($\beta=.14$, $p<.05$). Quisenberry and Foltz (2013) found that the peer domain on their resiliency measure significantly correlated with positive youth development ($r=.49$, $p<.001$), as operationalized by four universal growth values related to the definition of resilience utilized by this study. However, there was no analysis to explore which of these four values was most indicated or to investigate if the peer domain was associated with any other resilience factors.

3.3 Key Themes

This review aimed to systematically explore existing literature to better understand the potential influence of positive peer relationships on psychological variables related to resilience and coping. Four key themes from the findings of these studies have been identified in relation to this research question. These were (1) Perceived satisfaction with peer relationships; (2) The impact of peer group networks; (3) Positive attachments in adolescence

and; (4) The role of social skills. Each of these will be briefly discussed in turn and are illustrated in a proposed thematic map (Figure 2).

3.3.1 Perceived satisfaction with peer relationships. Overall, it appeared that when positive beliefs and feelings about peers were present, young people had better resilience-based outcomes. High levels of peer satisfaction was a recurring theme across most of the papers, rated by psychological factors such as how well participants got on with their peers and their felt sense of connectedness and caring in these relationships (Legault, Anawati & Flynn., 2006; Merritt & Snyder, 2015; Maurović, Križanić & Klasić, 2014; Mota & Matos, 2013; Perry, 2006). One study (Bender & Lösel, 1997) combined perceived satisfaction with concrete factors (e.g. the number of friends a person had) and only one study (Erol, Simesk & Münir, 2010) assessed peer satisfaction through concrete factors alone. The dominance of psychological appraisal of peer relationships (as opposed to more arbitrary concrete indicators) as a measure of peer satisfaction across the papers is useful, as it lends support to the possibility that an overall positive sense of peer relationships may contribute to resilience within this population.

There were a few exceptions to this. Whilst findings from Perry (2006) did not discount the role of satisfaction with peer group, analysis found this only to be effective when combined with satisfaction from another relationship network (e.g. with strong foster networks, $b=-6.69$, $p<0.001$). Bender and Lösel (1997), using longitudinal data, found that no individual peer factors had an impact on problem behavior levels over time (e.g. social satisfaction for boys, $R^2=.01$, $\beta=-.13$, ns), and that behavior was more related to norms for that peer group (discussed below). Interestingly, Legault, Anawati and Flynn. (2006) found that satisfaction with peers correlated in the same direction for both positive ($r=.29$, $p<0.001$) and negative ($r=.27$, $p<0.001$) coping skills.

The dominance of cross-sectional design, issues of generalizability and the use of bespoke and non-validated measures make it difficult to draw any firm conclusions in this area. However, the preliminary evidence suggests that how young people in alternative care appraise their peer relationships, as a possible moderating factor on their coping skills, warrants further exploration.

3.3.2 The impact of peer group networks. Four of the papers (Bender & Lösel, 1997; Edmond et al., 2006; Lee & Thomson, 2009; Merritt & Snyder, 2015) explored the impact of exposure to peers. It could be put forward that due to normative socialization processes, young people in alternative care may be motivated to align with their peers and minimize any differences between them. In line with this, Edmond et al. (2006) found that girls classed as having resilient trajectories, based on an absence of pathology and maladaptive behaviors, associated with peers that engaged in more positive peer behaviors ($x=2.2$, $p<.018$), less negative peer behaviors ($x=1.4$, $p<.001$) and less peer substance use ($x=1.3$, $p<.002$) than girls regarded as currently symptomatic. Merritt and Snyder (2015) found that participants with fewer deviant peers were significantly more likely to demonstrate nonproblematic behaviors (aOR=2.07, $p<.001$). These studies suggest that an individual is likely to demonstrate similar behaviors to their peer group, and that this is true for both positive and negative outcomes. However, as both studies used bespoke measures and offered analysis at a cross-sectional level, causality cannot be inferred.

Using longitudinal data Lee and Thomson (2009) suggested that exposure to deviant peers was a significant and strong predictor of problem behavior trajectories in both directions (i.e. positive peers may also play a protective role) ($x^2=2.97$, $p<0.02$). Bender and Lösel (1997) found that although no specific peer factors had a significant effect across time points, there was some initial support to suggest peer factors may have an impact upon

externalizing behavior rates over time, suggesting more investigation in this area is warranted. However, it may be that young people are naturally drawn to more similar peers.

3.3.3 Positive attachments in adolescence. It has been put forward that the development of peer relationships in adolescence can offer an opportunity for young people to develop healthy and successful attachments. This theme was highlighted and discussed in five papers (Legault, Anawati & Flynn, 2006; Merritt & Snyder, 2015; Mota & Matos, 2013; Quisenberry & Foltz, 2013; Perry, 2006). Based on their experiences, children in alternative care may find external authority figures unsettling, instead seeking comfort and consistency in relationships with friends (Merritt & Snyder, 2015; Quisenberry & Foltz, 2013), with whom they often spend more time (Perry, 2006; Quisenberry & Foltz, 2013).

Mota and Matos (2013) suggest that attachment functions can be transferred from parents to peers within peer relationships, including allowing for personal and social development. Their findings backed up this position, demonstrating that young people with higher levels of secure peer attachment are better able to develop empathy and assertion in their relationships ($\beta=.59, p<.05$). In addition, this study found a direct and positive effect of peer attachment on self-esteem ($\beta=.23, p<.05$) and active coping ($\beta=.14, p<.05$). This lends support to the possibility that successful peer relationships could allow for young people to build attachment relationships and associated developmental outcomes, in a way that they were unable to in childhood. Furthermore, the association between peer attachment and self-esteem was upheld when social skills was introduced as a mediating factor, with the authors suggesting that it may be peer relationships fostering feelings of security that in turn increase adolescent self-esteem. However, due to methodological limitations, particularly in the areas of outcome measures and managing confounding variables, more robust evidence is needed to confirm this proposition.

Legault, Anawati and Flynn (2006) found strong peer networks in adolescence significantly correlated to reduced levels of anxiety ($r=-.38$, $p<0.001$) and physical aggression ($r=-.28$, $p<0.001$), and also to increased general self-esteem ($r=.34$, $p<0.001$). Furthermore, when combined with relationships with a female caregiver, the impact of negative life events on anxiety levels was mediated by relationships with friends ($R^2=.17$, $p<0.001$). In addition, Perry (2006) found that strong social networks in adolescence were shown to significantly reduce levels of distress, though this effect size was only significant for peer networks in addition to one other network (e.g. female caregiver), with no network demonstrating significance in isolation). Despite the cross-sectional design of these studies, they highlight the potential of social networks in adolescence to reduce the negative impact of disruptive early attachments and support the proposition that newer networks can replace biological family support, without significant negative consequences for psychological distress.

3.3.4 The role of social skills. Social skills are highlighted as a possible impacting variable associated with peer relationships and resilience factors in five of the papers (Bender & Lösel, 1997; Legault, Anawati & Flynn, 2006; Maurović, Križanić & Klasić, 2014; Mota & Matos, 2013; Perry, 2006). It should be highlighted that the relationship between social skills, peer relationships and resilience could be conceptualized in different ways (e.g. positive peer relationships may be a result of increased baseline resilience).

Perry (2006) found that increased early levels of network disruption were associated with higher levels of later psychological distress, and that this relationship was mediated by the strength of current network domains. Thus, they suggested that the mechanism arising from early disruption may be an inability to develop and maintain sufficient networks (to replace previously lost networks) in adolescence. Bender & Lösel (1997) suggested that due to the early difficulties experienced by this population, a lack of social skills may lead to peer rejection, which in turn can further reinforce a lack of social support leading to increased

internalizing and externalizing problems, though this proposition was not further explored in their paper.

One paper (Mota & Matos, 2013) looked at the mediating role of social skills directly in relation to peer relationships and the resilience factors of self-esteem and coping, in a sample of institutionalized adolescents. With social skills as a mediating variable, the impact on active coping lost its significance, though this was upheld for self-esteem. This paper therefore suggests that social skills may be a key psychological variable in relation to resilience, as both a standalone and a mediating factor. Legault, Anawati and Flynn (2006) show a significant correlation between relationships with friends and general self-esteem ($r=.34$, $p<.001$), but that a baseline level of self-esteem is required for young people to create bonds and build positive relationships with their peer group. This in turn could suggest that positive peer relationships are an expression of resilience, affected by existing levels of self-esteem which impact on an individual's social skills. Maurović, Križanić and Klasić (2014) found the variable of individual resources to correlate most strongly with happiness ($r=.44$, p -value not reported). They suggest that this variable involves social skills, but it is not measured in isolation, so its unique influence cannot be extrapolated. In contrast, Merritt and Snyder (2015) found that despite both social skills and perceived peer connectedness separately demonstrating significant differences to clinical and non-problem behaviors, the relationship between these two variables was not significant ($r=.16$, ns).

4. Discussion

4.1 Key Findings

Four key themes have been presented as a result of this review. Despite interpersonal functioning being highlighted in the literature as an issue for this group, we found that young people reported satisfaction with their peer relationships, and there was preliminary support

for the proposition that satisfaction may be related to increased resilience. In line with this, we found some cross-sectional evidence that peer relationships may have a role, directly or indirectly, in mitigating some of the negative effects of early disrupted attachments.

Similarly, there was evidence of social skills influencing the relationship between peer relationships and resilience-based outcomes, although longitudinal research is needed to confirm the causal direction of this association. Future intervention-based research could support the development of social skills to improve and build peer relationships and explore the impact this has on resilience and wellbeing variables over time.

Finally, this review supports existing theories of peer contagion, suggesting that an individual's peer group is likely to impact them in both positive and negative ways, depending on the norms of their peers. Unfortunately, the mechanisms underpinning this influence were not examined in the studies included in this review, and cross-sectional designs meant that the direction of influence remains hypothetical. More attention to mechanisms and longitudinal designs are needed, to better understand the process by which peers influence each other (Palareti & Berti, 2009). Increased insight in this area would be particularly useful for clinical practice in group care facilities, where young people with significant behavioral problems are often clustered (Whittaker et al., 2016).

Despite our interest in positive outcomes from peer relationships, there was a concentration of negative outcomes in this population, a dominant focus on relationships with caregivers and a reliance on cross-sectional data. As such, the findings presented should be viewed as good indicators for valid and necessary future research foci rather than conclusive answers, and offer an important foundation for building future knowledge that could have potentially powerful implications for this vulnerable group.

4.2 Review of the Evidence Base

Despite the broad search criteria of this review initially identifying a large number of articles and the inclusion of studies that used negative outcomes as a demonstration of resilience, only ten studies were identified for inclusion. This reflects the lack of research focused on positive outcomes for young people in alternative care. In addition, this review has also highlighted the variation in the way this topic is currently explored in the literature. The heterogeneity in the studies, particularly in the way that outcomes are measured, makes it difficult to draw definitive conclusions, particularly in relation to causality between peer factors and resilience-based psychological variables, as most of the studies employed a cross-sectional design. This finding is in line with a recent systematic review exploring the related area of resilience factors in residential care (Lou, Taylor and DiFolco, 2018).

NICE (2017) guidelines for research in this population put forward a need for robust studies that are carried out in controlled environments that make use of standardized validated measures and that measure impact over time. Despite the limitations discussed, this review proposes emergent themes that offer interesting and useful contributions to the research question proposed, providing a foundation from which future research in line with these guidelines can develop.

It is noteworthy that none of the papers included used the same standardized measures, instead employing more bespoke, ad hoc individualized measurements, making it difficult to validate the findings on a wider scale. Whilst there are several well-validated tools of resilience, social support and interpersonal functioning available for adolescents, completion relies upon the subject of the research being sufficiently literate and engaged, which cannot be guaranteed with a disenfranchised population with disrupted education. The development of reliable and valid observational tools would allow for replicable and comparable research with this population.

4.3 Strengths and Weaknesses of the Review

This review offers a methodologically rigorous and replicable exploration into a known gap in the academic literature. Following initial scoping exercises, it used broad search terms, and a phase 2 search with additional terms, and a phase 3 updated search, in order to maximize the potential to locate articles of relevance. Using existing guidelines, it adapted quality criteria to ensure a meaningful comparison of articles rather than a presentation of floor and ceiling effects.

The limitations of this review are primarily in relation to data restriction, which could have led to relevant papers being excluded. Whilst a range of international studies were seen, the review was limited to those with titles and abstracts available in English. To allow for a feasible and valuable comparison of papers, qualitative papers were excluded, which could have potentially added further insight into the research question. The inclusion of peer reviewed articles only meant that unpublished PhD studies and third sector reports were excluded. In addition, the variation of quantitative data in these papers meant that a meta-analysis was not an option.

4.4 Implications

Several useful implications can be drawn from this review, with applicability to both research and clinical settings. Primarily, this review has highlighted some key areas for development within the research base, particularly in relation to methodological aims.

Existing research has laid the foundation for robust, longitudinal studies exploring peer relationships and resilience variables directly. Attention to sampling issues will help ensure that data generated can add necessary insight to the alternative care population. In addition, standardized measures for resilience and peer relationship variables, where they exist, should be used, and developed in a replicable way where they do not. Furthermore, a direct exploration of peer factors alongside resilience factors as a primary research question is

lacking in the literature. As highlighted by the preliminary evidence in this study, this is an area that could potentially generate useful knowledge and understanding into the unique experiences of the alternative care population. Methodologies that capture the views and experiences of young people from their own perspective would help add nuance to the existing evidence, and encourage development of interventions that have salience to young people. When this is expanded to intervention research there is an opportunity to include young people in the design of interventions to ensure it meets their interpersonal needs. We have highlighted the need for longitudinal research with this population. The feasibility of such designs are challenged by the transient and disenfranchised nature of the population but including young people as collaborators in the research (e.g. consulting with young people on how to design and conduct the research to make it relevant, training young people to recruit participants and collect data) might facilitate better engagement and retention.

Despite criticism within the literature a focus on negative outcomes predominates. By primary school age, children in alternative care are already acutely aware of the negative connotations that accompany being referred to as ‘in care’, and can articulate their frustrations towards this (Mannay et al., 2017). In contrast, the findings of this review suggest that peers can be a source of resilience. Future research should capture resilience-based outcomes in their own right, rather than implying them through a lack of negative outcomes. It is important that we question the impact that the negative framing within the literature has on those working with young people and indeed, indirectly on young people themselves. In doing this, we can work towards developing a more positive and helpful rhetoric, drawn directly from the strengths of this population.

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Authors (Year)	Research Questions	Selection of subjects	Assessment of study	Confounding factors	Data analysis and results	Overall generalizability
Bender and Lösel (1997)	AA	WC	AA	AA	WC	AA
Edmond, Auslander, Elze and Bowland (2006)	AA	AA	WC	WC	WC	AA
Erol, Simsek and Münir (2010)	AA	WC	WC	WC	AA	WC
Lee and Thomson (2009)	WC	AA	AA	AA	WC	IA/NA
Legault, Anawati and Flynn (2006)	WC	AA	AA	WC	WC	WC
Merritt and Snyder (2015)	WC	WC	WC	WC	WC	WC
Maurović, Križanić and Klasić (2014)	WC	IA/NA	AA	AA	AA	AA
Mota and Matos (2013)	WC	AA	IA/NA	IA/NA	AA	AA
Perry (2006)	AA	WC	IA/NA	WC	WC	WC
Quisenberry and Foltz (2013)	WC	WC	AA	IA/NA	AA	AA

Table 1: Quality ratings for included studies

WC – Well Covered AA – Adequately Addressed IA/NA – Insufficiently Addressed/Not Addressed

Table 2: Summary of characteristics and findings of included studies

Authors (Year); Country	Study Design	Sample Characteristics	Peer Relationship Outcomes	Resilience Outcomes	Key Findings
Bender & Lösel (1997); Germany	Longitudinal; Observational	n=146 at baseline (T1), n=100 at 2 yr FU; 55% with severe behavioral problems Age: 15 years at baseline ; Gender: 34% female (F)	Bespoke measures: social network size; social support (frequency, satisfaction)	YSR-CBCL (Externalizing sub-scale)	Social support frequency and satisfaction correlated in boys ($r=.54, p<.001$) and girls ($r=.63, p<.001$) at T1. Peer factors not associated with problem behavior rates across time. Negative effect of good friendships on problem behaviors in girls only ($\beta=0.36, p<.05$).

Edmond et al. (2006); USA	Cross-sectional; Observational	n=99 F with CSA experience (YSR Scores defined Resilient trajectories (R) n=49; currently symptomatic (S) n=50); Age: 15-18, M=16.33; Ethnicity: 58% youths of color; Home environment: 64% in congregate living, 36% in a home setting	Bespoke measure: positive peer behavior; negative peer behavior and peer substance use	LOT-R and FTO (Future Orientation) Education – Bespoke measure	R females showed higher levels of positive peer influence than S females, on all three subscales Negative peer behavior predicted resilience status ($\beta=-1.01, p<.005$)
Erol, Simesk & Münir	Cross-sectional; Observational	N=350 adolescents, N=284 caregivers, N=281 teachers.	CBCL-YSR (Social relations sub-scale)	CBCL (Total problems scale - internalized and externalized problems)	Good social relations correlated with decreased internalizing problems ($r= .16,$

(2010); Turkey		Age: 11-18 years, M=14.6 years Gender: 53.4% F			p<.05). Association between social relations and total problems non-significant.
Lee and Thomson (2009); USA	Longitudinal; Observational	n=744 Age: M=15.1 Gender: 40% F Ethnicity: 15.1% white Minimum 90 days in group care	Deviant peer density - proportion of deviant peers (diagnosis of ODD or CD) in a young person's immediate living environment Peer externalizing behavior rate – staff recorded	Bespoke measure of externalizing behaviors recorded by staff at three monthly points	Deviant peer density strongest predictor of trajectory group membership after controlling for other background characteristics ($X^2=2.97$, $p<0.02$). Youth with peer groups of no problem trajectories had a 98% probability of no problem or low problem trajectories themselves.

Legault, Anawati and Flynn. (2006); Canada	Cross-sectional; Observational	<p>n=220</p> <p>Age:14-17 years, M=15.3 years</p> <p>Gender: 50% F</p> <p>80% of sample from foster homes.</p> <p>Average 6 negative life events + coming into care</p>	Marsh Friendship Scale	<p>NLSCY (anxiety, emotional distress, physical aggression, self-esteem).</p> <p>Bespoke scale: approach coping and avoidant coping strategies.</p>	<p>Correlations between relationship variable and:</p> <p>General self-esteem ($r = .34$, $p < .001$); Approach coping strategies ($r = .29$, $p < .001$); Avoidant coping strategies ($r = .27$, $p < .001$); Anxiety ($r = -.38$, $p < .001$); Physical aggression ($r = -.28$, $p < .001$)</p> <p>High quality relationships with both female caregivers and friends mediated cumulative life events-anxiety relationship ($R^2 = .17$, $p < .001$).</p>
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Merritt and Snyder (2015); USA	Cross-sectional; Observational	N=727 Age: 11-17.5 years, M=13.72 years Gender: 49% F Ethnicity: 34.23% white, 31.23% black, 27.59% Hispanic, 6.95% other	Loneliness and Social Dissatisfaction Questionnaire for Young Children (Perceived School Peer Connectedness) DFSCA The Child Deviant Peer Affiliation Measure	CBCL-YSR (youth behavior) SSRS (Social Skills)	Children more likely to display normal behaviors if they: Have fewer deviant peers (aOR = 2.07, p<.001); Have better social skills (aOR = 1.94, p<.001); Perceive strong peer connectedness (aOR = 1.52, p<.01)
Maurović, Križanić and Klasić (2014); Croatia	Cross-sectional; Observational	N=118 Age: 14-18 years, M=16.47 years Gender: 26% F	Bespoke measure: Caring relationship with friend(s)	SHS (Happiness)	Caring relationships with friends moderately correlated with happiness (r= .33, p=NR).
Mota and Matos (2013); Portugal	Cross-sectional; Observational	n=109 Age: M=16.19 years Gender: 74.3% F	Peer version of the IPPA (peer attachment)	SSQ (Social Skills) RSES (self-esteem) CASQ (Coping)	Peer attachment had direct positive non-mediated effect on self-esteem ($\beta=.23$, p<.05)

93.6% in regular contact with family. Deviant behavior = exclusion criterion

and social skills ($\beta=.59$, $p<.05$) Positive effect of peer attachment on active coping ($\beta=.14$, $p<.05$), mediated by social skills.

Perry (2006); USA	Cross-sectional; Observational	Foster Care sample (inc. kinship care) - n=154; Age: 15-18 years, M=16.4 years; Gender: 61% F; Ethnicity: 45.5% non-white Control sample - n=4,062;	Bespoke measure: strength of peer network	Modified CES-D (Psychological Distress/Depression) Component of Langner index (Anxiety)	Foster care sample less likely to feel their friends cared a lot ($X^2=60.20$, $p<.001$). Perceived strength of foster care network more important than peer network for depression symptoms. Lower depression predicted by strong peer networks combined with strong foster
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Gender: 50.8% F;
Ethnicity: 37.7% non-white

networks (b=-6.69, p<.001) and strong biological networks (b=-6.15, p<.01). No associations with anxiety

Quisenberry & Foltz (2013); USA	Cross-sectional; Observational	n=42; All diagnosable mental health disorder Age: 13-18 years, M=16 years; Gender: 64% F Ethnicity: majority Caucasian N ACEs: M=4.71	ARQ (Peer domain)	ARQ Circle of Courage Questionnaire (Positive Youth Development)	Peer domain correlated with positive youth development (r=.49, p<.001).
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ARQ - Adolescent Resiliency Questionnaire; CASQ - Coping Across Situations Questionnaire; CBCL – Child Behavior Checklist; CBCL-YSR – Youth Self Report Questionnaire; CES-D – Centre for Epidemiological Studies – Depression Scale; DFSCA – Drug Free Schools Outcomes Study Questions; FTO – Future Time Perspective Inventory; IPPA – Inventory of Parental and Peer Attachment; LOT-R – Life Orientation Test – Revised; NLSCY – National Longitudinal Study on Children and Youth; NR – Not Reported; NSCAW II - National Survey

of Child and Adolescent Well-Being II; SHS - Subjective Happiness Scale; SSQ - Social skills questionnaire; SSRS – Social Skills Rating System; TAME-S - These Are my Experiences: A Survey of Foster Children