Individual and interpersonal factors associated with psychosocial functioning among adolescents in foster care: A scoping review

Brianne H. Kothari[1], **Jennifer Blakeslee**[2], **Rebecca Miller**[2]

[1]Oregon State University-Cascades

[2]Portland State University

Abstract

Risk reduction and strength enhancement are both necessary strategies to improve outcomes for youth in foster care who have experienced adversity. Decades of research have articulated the negative long-term outcomes of youth in foster care, but less is known about youth-level modifiable protective factors that can be nurtured through intervention to improve well-being. This scoping review was conducted to synthesize the state of the science on proximal, modifiable individual and interpersonal factors that are associated with psychosocial well-being among adolescent youth in foster care. Following rigorous and recommended methods, we systematically searched, selected and synthesized 20 years of peer-reviewed literature focused on 13–19 year olds in foster care. 41 peer-reviewed, quantitative studies met specified inclusion criteria and were included in this review. We charted the data and synthesized our findings in consultation with an advisory group of researchers, practitioners, and youth with lived experience. Overall, the review highlighted key categories of individual factors (individual strengths, psychosocial needs, and developmental skills) and interpersonal factors (relationships with peers/siblings, caregiving adults, and caring adults in the community) that can have protective value and are associated with psychosocial functioning for adolescent youth in foster care. Moreover, when youth have their needs met, increase their skills and develop strengths, it often leads to better outcomes as well as more and/or higher quality relationships with important people in their lives. Similarly, when youth develop and maintain quality relationships, those connections often lead to opportunities to advance their skills, strengths and positive outcomes. The results of this review contribute new insights for research, practice, and policy intended to enhance psychosocial well-being for young people in foster care. Findings also highlight specific individual and interpersonal factors

that interventionists might consider as potential targeted mechanisms of change when developing programming for this population. Implications are discussed.

1. Introduction

Within a prevention science and resilience framework, risk reduction and strength enhancement are both necessary to improve outcomes for youth who have experienced adversity, including youth in foster care (Blakely et al., 2017; Goldstein, Faulkner, & Wekerle, 2013). To date, the literature focused on adolescents in foster care has largely focused on risk factors and problematic outcomes (e.g., behavior problems, aggression, substance use, etc.) (Garland et al., 2019; McMillen et al., 2005; Stott, 2012). Children and youth in foster care are at elevated risk due to the abuse, neglect, and behavioral problems most often associated with foster care placement, all of which predict ongoing psychosocial difficulties in adolescence and young adulthood (e.g., McMillen et al., 2005). Moreover, foster care placement itself can introduce risks such as placement instability that are associated with increased risk (e.g., Stott, 2012). Research focused on youth in foster care has consistently documented poor transition outcomes, including relatively low levels of educational attainment and employment, as well as high rates of early parenting, homelessness, criminal justice involvement, and elevated mental health and substance abuse diagnoses (see Gypen, Vanderfaeillie, De Maeyer, Belenger, & Van Holen, 2017, for a recent systematic review).

A growing body of resilience literature, however, has highlighted the value of nurturing individual and interpersonal strengths (aka protective factors) indicating that these efforts may be particularly important for youth who have experienced greater adversity (Griffin et al., 2009). "Resilience, understood ecologically, is the capacity of individuals to navigate their way to the resources they need to succeed and their ability to successfully negotiate for resources to be provided in ways that are meaningful to them (Ungar, 2011)." (Ungar, 2018, p. 4). In a resilience framework, positive outcomes are not just the mere absence of problems, but the presence of strengths (Afifi & MacMillan, 2011; Benson & Scales, 2011), such as individual assets (e.g., knowledge, skills) and interpersonal resources (e.g., social support, social networks).

For example, there is consensus in child welfare research and practice that supportive social networks are a necessary – and often absent – developmental resource for youth aging out of foster care. In addition, caring and supportive relationships, specifically youth's relationships with caring adults and prosocial peers, have shown to be beneficial for adolescents in foster care (e.g., Farineau, Wojciak & McWey, 2013; Long et al., 2017). Nevertheless, youth in foster care commonly lack the tools and skills to develop these critical social relationships. Moreover, the contexts that youth exist within and the instability they commonly experience as wards of the State, make the development and maintenance

of these critical relationships even more challenging. To complicate things further, evidence suggests that youth in foster care tend to have higher psychosocial needs (e.g., Grey et al., 2015) and too commonly these needs present in a context of relatively limited resources and fewer opportunities for developing skills and abilities to buffer the adversity youth have experienced.

This problematic combination of high psychosocial needs in the context of relatively few skills and/or resources requires careful and deliberate attention at multiple ecological levels. Further, researchers have demonstrated the benefits of focusing more specifically on protective processes among foster youth (Yates & Grey, 2012) and others have argued for the specification of targeted intervention mechanisms (e.g., Raghavan, Munson, & Le, 2019). Thus, there is a need to identify which protective processes or preventive mechanisms to target in order to build strengths and improve psychosocial outcomes among youth in foster care.

The purpose of this scoping review is to synthesize the empirical evidence and to specify a set of modifiable (or "intervenable") individual and interpersonal factors and mechanisms associated with adolescent foster youth's psychosocial functioning and well-being. Our aim is to describe the existing evidence, map key concepts, and identify gaps in current research (Colquhoun et al., 2014). The primary question that guides this review is: *What are the proximal and modifiable individual-level (e.g., skills, attitudes) and interpersonal factors (e.g., family relationships) that are associated with psychosocial functioning (i.e., mental health, behavior, adjustment, well-being) among youth in foster care?* Results are intended to be useful in clarifying what is currently known, identifying gaps in the current body of evidence, and articulating the ways in which findings may be helpful for future research, intervention development, practice, and policy focused on adolescent youth in foster care.

2. Methods

This scoping review follows rigorous and recommended methods (see Arskey & O'Malley, 2005; Levac et al., 2010; Colquhoun et al., 2014). Our aim was to systematically search, select, and synthesize existing knowledge about modifiable psychosocial factors that have been shown to be related to adjustment and well-being among youth in foster care, then to gather and incorporate feedback from a panel of experts, and lastly to synthesize our findings in this review. Note that our aim was not to evaluate the strength and rigor of existing evidence on our topic, but rather to conceptually "map" the relevant literature exploring psychosocial mechanisms to date, hence our selection of a scoping methodology versus a more traditional systematic review (Munn et al., 2018).

2.1 Search Terms and Databases

We used a combination of search terms intended to be inclusive of potential terminology and to produce a set of studies including youth-level individual and interpersonal factors, where at least one could be considered modifiable through intervention. We searched for following terms:

- • "foster youth*" [OR "youth* in foster care" OR "young people in foster care" or "adolescents in foster care" OR "teens in foster care" OR "emancipat* from foster care" OR "emancipat* from the child welfare system" OR "ag* out of foster care" OR "ag* out of the child welfare system" OR "transition* from foster care" OR "transition* from the child welfare system"

- • AND well-being [OR wellbeing OR "well being" OR "mental health" OR adjust* OR develop* OR coping OR behav* OR diagnos* OR problem* OR symptom* OR diagnos* OR clinical OR treatment OR psycho* OR emotional]

- • AND social* [OR support* OR network* OR relation* OR permanen* OR engage* OR connect* OR participat*].

Using these terms, we searched the peer-reviewed literature published in English within the past 20 years using the following library databases: EBSCO (including the *Academic Search Premier, Criminal Justice Abstracts, Education Research Complete, ERIC, MEDLINE, Psychology and Behavioral Sciences Collection,* and *SocINDEX* databases): Social Sciences Citations Index (SSCI); Social Services Abstracts (SSA); and PsychINFO.

2.2.   Inclusion and Exclusion Criteria

Studies were included in this scoping review if they were: (1) published in English within the last 20 years (1/1/2000 to 12/31/2019); (2) peer-reviewed empirical studies with at least two quantitative variables of interest; and (3) focused on youth in foster care between the ages of 13 and 19. Note that for the purposes of this review, the term "foster care" generally refers to family-based foster care (including placement with relatives) or congregate care, including residential treatment for youth who are under the guardianship of the state; studies primarily including young people outside of this definition were excluded. Studies were also excluded from this review if they did not contain modifiable youth-level variables (defined, in part, as something that could be addressed through a youth-focused intervention), or if they were systematic or scoping reviews, intervention studies, or qualitative studies. Studies were also excluded if the majority of the sample was outside of this focus age range. See Figure 1 for the flowchart of our article selection protocol.

2.3   Review Stages

We followed rigorous and recommended review stages (see Arskey & O'Malley, 2005; Levac et al., 2010; Colquhoun et al., 2014). After identifying our research question (Arksey & O'Malley's Stage 1), we identified and selected relevant studies (Stages 2 and 3). The initial search using databases and key terms produced 1,718 total references, which were then screened within each database to remove duplicates, non-English articles, and articles entirely unrelated to youth and/or foster care; 1,155 records were then downloaded into reference software for further review and application of inclusion criteria. After a supplementary title and/or subject screen within the 1,155 downloaded records, we removed 671 duplicate references that appeared within multiple databases. Then, 484 reference titles and abstracts were reviewed to ensure they met initial inclusion criteria (i.e., empirical peer-reviewed, studies that focused or included youth in foster care), with 108 exclusions. Next, two child welfare researchers with doctoral degrees in social work, and each with

more than a decade of research and publishing related to psychosocial research with youth in foster care, reviewed abstracts and titles more closely to systematically exclude studies that did not focus on youth-specific or youth-reported measures (e.g., study focused on caregiver skills without any youth-specific measures) or if studies were not specifically relevant to our review (e.g., studies that focused on post-secondary education experiences among former foster youth). We removed 169 studies during this stage, with the two researchers agreeing on inclusion of each article for further review.

A total of 207 full-text articles were reviewed to verify that each had at least two relevant youth-level variables, resulting in 107 exclusions. At this stage, we also applied more narrow criteria and required included studies to have measured at least one youth-level variable that would typically be considered to be modifiable in terms of intervention development for young people in care. For example, we included variables like youth- or caregiver-rated mental health or behavior, skills or attitudes, social support, or relationship characteristics; on the other hand, we did not include less mutable factors, such as foster placement type or stability, maltreatment history, or legal permanency status, to be modifiable through youth-level intervention. Any discrepancies were resolved between the two researchers before making a final determination about inclusion.

Given the volume of studies remaining at this stage (100 articles), we decided to focus our review on quantitative studies reporting on at least two youth-level factors or determinants with at least one modifiable factor, to meet the aim of the scoping review. We therefore excluded qualitative articles (n=19), intervention studies (n=21) and extant scoping or systematic reviews or meta-analyses (n=19), although some of these studies are included in the discussion to help contextualize our quantitative review findings in the context of qualitative and intervention studies focused on this population. Researchers then extracted and analyzed the remaining 41 studies. Throughout this study selection process, we sorted articles and charted the data (Arksey and O'Malley's Stage 4) in an iterative process that was refined over time using a spreadsheet to track key information from primary sections of each study (i.e., literature review, methods, results, discussion) and to annotate the findings for our review synthesis.

Researchers then analyzed the results of the study to include both a descriptive and numerical summary as well as a thematic analysis across studies (Stage 5), which entailed familiarization with the data, coding the studies in terms of primary categories and subcategories, developing emergent themes across studies within a category or subcategory, and iteratively reviewing the fit of the studies within our categories and themes (e.g., Bruan & Clarke, 2006). Moreover, we also received consultation from a panel of adult experts who had experience growing up in the foster care system and/or worked with young people in care (optional Stage 6). This panel consisted of five young adults with lived experience in foster care, five people currently working in the practice field with older youth in care or young adults with lived experience, and two applied researchers focused on system-involved young people. Researchers developed a clear purpose for consultation meetings and shared preliminary findings from this scoping review to gather input from this advisory group around interpretation and presentation of findings, similar to the purpose and benefits of "member checking" in qualitative research (e.g., Creswell, 1994). These expert stakeholders

were able to provide their feedback in a variety of ways (i.e., after presentation of the results during an advisory board meeting, via email after presentation, or during a follow-up meeting). This group's insights and feedback were then incorporated into the findings and were shared for a final advisory review before being included in this manuscript.

3. Results

A total of 41 studies met our inclusion criteria and were included in this scoping review. The following information provides a descriptive and numerical summary of overall findings. The majority of these studies were published in child and family or social work journals (e.g., Children and Youth Services Review, Child and Family Social Work, etc.) with some published in health or public health journals (e.g., Pediatrics, International Journal of Public Health). As shown in Table 1, most (n=35, 85%) were published in the last decade with the oldest included study being published in 2006. Included studies encompassed both cross-sectional (n=27) and longitudinal designs (n=14). Some studies examined differences between subgroups in foster care (e.g., those with and without a mentor) and two studies also compared youth in foster care to a non-foster sample.

Sample sizes ranged from small (n=37) to large, population-based studies (n=32,479), but the largest sample of youth in foster care was 1,595. All of the studies focused on youth from developed countries; the majority were from the United States, but three studies were from either Canada or the United Kingdom. In addition, some studies were focused on a particular subgroup of youth in foster care (e.g., African American youth; youth with disabilities; youth receiving ILP services). Studies using existing national datasets were also included in this review: one used National Longitudinal Study on Adolescent Health (Add Health) data; one used National Youth in Transition Database (NYTD) data; one used National Student Clearinghouse data; and seven used data from the National Survey of Child and Adolescent Wellbeing (NSCAW). Studies also included analyses from state surveys and/or regional studies (see Table 1).

Dependent variables examined encompassed both psychological and behavioral outcomes, with a primary focus on problematic outcomes (e.g., internalizing behaviors, externalizing behaviors, alcohol and other drug use, risky behaviors, etc.). Positive psychological functioning or well-being was commonly assessed as youth having or reporting fewer challenging symptoms or reduced problem behaviors; however, a subset of studies did examine more positive outcomes as well (e.g., well-being, life satisfaction). The reporting agent for these outcomes included youth, caregivers, and sometimes multiple reporting agents for the same outcomes; results sometimes differed depending on the reporting agent (e.g., Cooley et al., 2015; Thompson et al., 2016). Some studies in this review focused on specific modifiable factors (e.g., self-determination) whereas other others examined these modifiable factors more broadly (e.g., internal resilience).

Most of the studies in this review included variable-centered analyses (e.g., regressions, path analysis, structural equation modeling, etc.); however, three studies used person-centered approaches such as cluster analyses and latent class analyses (Blakeslee et al., 2017; Perry, 2006; Shook et al., 2009). Results from these person-centered studies

emphasized the importance of examining youth's characteristics alongside characteristics of the environments in which they live to understand youth's outcomes. While this review was not focused on analyzing the quality of studies, it is important to mention the variability in the rigor of included studies ranging from very small cross-sectional studies to large, longitudinal multi-method, multi-informant studies.

Many studies also examined youth's sociodemographic characteristics alongside factors that are more commonly considered to be modifiable. Results of individual studies sometimes did indicate differences in youth outcomes based on demographic characteristics such as gender, race, and type of maltreatment (see e.g., Keller et al., 2010; McMahon & Fields, 2015; Polgar & Auslander, 2009; McWey & Cui; Shim-Pelayo & De Pedro, 2018; Zinn et al., 2017). However, this review is focused on more clearly understanding individual and interpersonal modifiable factors as particular areas that can be addressed within preventive interventions.

Key themes emerged from the thematic analysis across studies. During the iterative process of charting data, researchers read each study, charted data (key components of each study from literature review, methods results and discussion sections), and documented and discussed themes that emerged. The goal was to identify themes that might be helpful in articulating mechanisms for change for individual youth focused preventive interventions. After researchers reached consensus of key themes that emerged across studies, the summary was presented and discussed with the expert panel. These individual and interpersonal categories highlight potential focal areas to intervene to improve psychosocial functioning for adolescent youth in foster care (see Figure 2).

3. 1. Individual Factors

The left side of Figure 2 highlights the categories of modifiable individual characteristics focused on adolescent youth in foster care. Three important categories of modifiable individual factors emerged from this review: 1) individual strengths, 2.) psychosocial needs, and 3) developmental skills.

3.1.1. Individual strengths.—The first category includes studies centered on youth strengths and/or the intrinsic qualities of adolescent youth in foster care. The studies that fell in this broad category measured individual-level resilience-promoting factors or internal resilience (Blakely et al., 2017; Diehl et al., 2013; Goldstein et al., 2013). In some ways, this first category can be considered a higher order or umbrella category representing individual assets more broadly. Results from these studies demonstrated that youth strengths commonly buffered previous adversity, including maltreatment and trauma (Blakely et al., 2017; Goldstein et al., 2013). Blakely and colleagues (2017) found a buffering effect of strengths (i.e., optimism, interpersonal effectiveness, talents and interests) on the relationship between trauma experiences and risk behavior at follow-up. Goldstein and colleagues (2013) examined the relationship between internal resilience (as measured by CD-RISC which captured youth's patience, personal competence, self-efficacy, recognition of limits of control, and viewing challenges as opportunities) and youth's psychosocial outcomes including depression, with internal resilience being significantly associated with

fewer depression symptoms over and above the effects of child maltreatment (Goldstein et al., 2013). In another study, youth assets (as measured by a 20-item scale developed by Search Institute which included feeling proud of self, telling the truth, etc.) were also shown to be predictive of more open attitudes towards adoption and mentoring (Diehl et al., 2013).

Studies in this category highlighted the importance of self-concept and self-identity and reflect the potential mechanisms for preventive intervention focused on aspects of self, such as youth identity or empowerment. Some included studies focused on self-determination (Lee et al., 2018) or self-esteem (Farineau et al., 2013; Thompson et al., 2016; Mihalec-Adkins & Cooley, 2019). Lee and colleagues (2018) examined mental health outcomes (i.e., posttraumatic stress symptoms, hopelessness and quality of life) among youth in foster care with disabilities and found that self-determination was a consistent protective factor for young people. Moreover, Farineau and colleagues (2013) examined the association between key relationships (i.e., with biological mothers, foster parents and peers) and self-esteem (as measured by Negative Self-Esteem subscale on Children's Depression Inventory (CDI-SE)), and demonstrated that relationships with peers had the greatest impact on youth's self-esteem (Farineau et al., 2013). Mihalec-Adkins & Cooley (2019) found that youth's self-esteem (also measured by CDI-SE) mediated the association between school engagement and externalizing behaviors. Other studies focused more on individuals' positive feelings towards particular aspects of the individual such as one's ethnic-racial group membership (Tyrell et al., 2019) or positive orientations and attitudes towards the future (Polgar & Auslander, 2009).

3.1.2. Psychosocial needs.—The second category of individual factors reflect psychological needs such as attachment and belonging (Joseph et al., 2014; Okpych & Courtney, 2018; Salazar, Rayburn et al., & Zinn, 2017). These studies recognize adolescent youth's needs of security and belonging, but also attempt to examine the ways in which youth's early childhood experiences may (or may not) carry forward to their lives as teenagers. For example, Joseph and colleagues (2014) examined attachment patterns for adolescent youth in foster care as compared to a normative-risk sample of youth, and while a majority of youth in foster care had insecure relationships with birth parents, approximately half had secure relationships with foster parents. These findings highlight that prior poor attachment experiences might not preclude positive caregiver attachments when youth-foster parent relationships are of high quality. These early attachment relationships are important because they may be linked to important psychosocial outcomes in adolescence. For example, higher avoidant attachment decreased the odds of both college persistence and degree attainment even after controlling for confounders (Okpych & Courtney, 2018).

In addition to attachment, feeling emotionally secure and having a sense of belonging are also important in regards to psychosocial outcomes for youth in foster care (Rayburn et al., 2018; Salazar et al., 2018). Feeling emotionally secure in relationships with caregiver mediated the relationships between exposure to violence and youth internalizing, externalizing and trauma symptoms (Rayburn et al., 2018). Additionally, a sense of family belonging was associated with key transition outcomes (Salazar et al., 2018). Moreover, Zinn (2017) indicated that youth's insecure attachment might be a proxy for an individual's capacity to develop and maintain interpersonal relationships.

3.1.3.   Developmental skills.—The third category reflects key developmental skills associated with positive psychosocial outcomes for adolescent youth in foster care, including reduced internalizing and externalizing behaviors, mental health service utilization, and improved well-being. Broadly, such increased youth skills were associated with measures of improved psychosocial functioning for adolescents across the age spectrum. Articles that were included in this category generally highlight the importance of youth's social and relational skills (Midhalec-Adkins & Cooley, 2019), preparedness for change (Van Ryzin et al., 2011), help-seeking (Scott et al., 2015) and other important independent living skills (Greeno et al., 2019; Jones, 2012; Yates & Grey, 2012). Moreover, a few studies also demonstrated how positive youth outcomes might depend on a youth's ability to match their own capacity (i.e., their knowledge, skills, or self-efficacy) to the external resources available to them (e.g., access to social or financial support) and the adaptive processes that may be at play in order to do this effectively. These 'capacity in context' studies, largely focused on coping in this review, highlight the complexity involved in this process for adolescent young people in care (Grey et al., 2015; Jackson et al., 2015).

3.2.   Interpersonal Factors

The right hand side of Figure 2 delineates interpersonal factors or the key relationship categories that emerged as important from included studies. Three categories of relationships were consistently associated with psychosocial outcomes: 1.) peers and siblings, 2.) caregiving adults, and 3.) caring adults in the community (see right hand side of Figure 2).

3.2.1.   Peers and siblings.—Studies in this category highlight the important role peers play in regards to psychosocial outcomes for adolescent youth in foster care, specifically prosocial and caring peers (Farrineau et al., 2013; Farrugia & Germo, 2010; Farrugia & Sorkin, 2009; Long et al., 2017; Perry, 2006; Shook et al., 2009; Thompson et al., 2016). Given that youth in this adolescent age range spend the majority of their waking hours at school and that important connections may have been interrupted when they became wards of the state, peers play an important role. Adolescent youth with more close friends were identified as more resilient (Jones, 2012). Warmth and acceptance from peers was also associated with better youth outcomes (i.e., lower levels of problem behavior) (Farruggia & Germo, 2015). Peer relationships were identified as the most influential relationships associated with youth's self-esteem (when also examining caregiving adults) (Farrineau et al., 2013). In addition, self-esteem was also shown to mediate the association between peer relationships and youth behavior (Thompson et al., 2016). It is important to note; however, that it is not the presence of peers that is associated with positive outcomes for youth; rather, it is the presence of and involvement with prosocial peers that matters for youth in foster care. That is, high levels of involvement with deviant peers is associated with a host of negative youth outcomes (Shook et al., 2009). Siblings are often thought of as a subset of youth's peers; therefore, siblings are also included in this category as they can also have an impact on youth's psychosocial outcomes (Wojciak et al., 2013).

3.2.2.   Caregiving adults.—Studies that fit this category emphasize the important role caregiving adults have on outcomes for youth in foster care (Blakeslee et al., 2017; Cooley

et al., 2015; Farrineau et al., 2013; Farruggia & Germo 2015; Joseph et al., 2014; Keller et al., 2010; McMahon & Fields, 2015; McWey & Cui, 2017; Perry, 2006; Rayburn et al., 2018; Salazar et al., 2018). This category incorporates both relative (i.e., biological or birth parents, other kin providing caregiving) and non-relative caregiving adults (e.g., non-kin foster parents) recognizing that that the specific type of caregiving adult might be differently associated with psychosocial outcomes for youth. Many studies highlighted the complexity of youth's family and social ecology, but found robust networks to be more strongly associated with positive outcomes for youth in foster care (Blakeslee et al., 2017; Perry, 2006). In addition, youth's perception of positive youth-caregiver relationships is important for their well-being and mental health outcomes (Cooley et al., 2015; Rayburn et al., 2018). When frequent contact was both safe and possible, contact was associated with positive youth outcomes (McWey & Cui, 2017). Included studies tended to explore additional characteristics about these youth-caregiver relationships (e.g., quality or closeness, emotional security, involvement, frequency of contact, and type of contact). Poorer youth-caregiver relationships (e.g., limited closeness) was associated with worse psychosocial outcomes (e.g., criminal conduct) (McMahon & Fields, 2015). Some studies also emphasized the importance of quality caregiving adults in the context of high risk. For example, having high quality relationships is particularly important when risk is high (Farrugia & Germo, 2015).

3.2.3   Caring adults in the community.—Included studies in this category focus on additional adults in the larger community (i.e., beyond adults providing a caregiving role) and their role in foster youth's psychosocial outcomes (Ahrens et al., 2008; Farrugia & Sorkin 2008; Long et al., 2017; Munson & McMillen, 2009). These studies focused on longer-term mentoring relationships (Ahrens et al., 2008; Munson & McMillen, 2009) and relationships with other important non-parental adults in youth's lives (i.e., non-parental adults who youth felt would 'be there; for them if needed; Farrugia & Sorkin, 2009) including teachers (Long et al., 2017). These studies highlighted the value of quality, supportive relationships with these adults and the way these interpersonal relationships may serve as a buffer for adolescents in foster care. The qualities, characteristics and behaviors of these important adults tends to be related to youth outcomes (Farrugia & Sorkin, 2009). However, while these included studies demonstrated that supportive relationships with caring adults are important for foster youth's psychosocial outcomes, they also revealed that not all youth in foster care have supportive non-kin adults in their lives (Munson & McMillen, 2010). Moreover, some of their relationships with these important adults (e.g., teachers) are reported to be of lower quality compared to their non-foster counterparts (Long et al., 2017).

4.   Discussion

This study sought to synthesize 20 years of empirical evidence and identify proximal and modifiable individual- and interpersonal- factors associated with psychosocial functioning among adolescent youth in foster care. The results highlight the heterogeneity of youth's experiences and key categories of individual and interpersonal factors that appear to be critically important for most youth in foster care and deserving of additional attention.

The individual and interpersonal factors from this review were summarized within group (i.e., individual or interpersonal); yet, many studies highlighted the bidirectional nature of individual and interpersonal factors (see arrows in Figure 2). That is, when youth have their needs met, increase their skills and develop strengths, it often leads to better outcomes as well as more and/or higher quality relationships with important people in their lives. Similarly, when youth develop and maintain quality relationships, those connections often lead to opportunities to advance their skills, strengths and positive outcomes.

4.1.   Synthesis of Findings

Consistent with a resilience framework, included studies highlighted the importance of both risk and protective factors in predicting psychosocial outcomes for adolescent youth in foster care, with protective factors or strengths often buffering the risks or adversity adolescent youth experienced (Brook et al., 2015; Farruggia & Germo, 2015; Greeno et al., 2019; Lee et al., 2018). This review also reflects the salient role interactions play in shaping adaptive function of youth in foster care over time. These interactions (e.g., within an individual youth or between a youth and key individuals in their social network) can have cascading consequences that may be positive or negative. The process of resilience is complex and formal and informal social networks providing meaningful and relevant resources to individuals is an important part of that process (Ungar, 2013). This dynamic between individual factors and interpersonal factors was commonly discussed in included studies; the challenge, however, is that many youth in foster care find themselves in the more problematic combination of both limited skills and resources.

Within resilience science, the principles of differential impact also help to explain why some youth do well in one outcome or domain where other youth do not (Ungar, 2018). First, environments contribute to youth's ability to adapt. Therefore, if meaningful supports are provided to young people who experience adversity, they are more likely to adapt in positive ways. Second, the outcome often depends on the interaction of risk level and resource level. Third, more complex adversity exposure requires more complex supports to nurture resilience and overall functioning (Ungar, 2018). This was evident, for example, in the studies we referred to highlighting the effectiveness of youth coping, where youth skills are dependent on the supportiveness and resources within their context (Grey et al., 2015; Jackson et al., 2015).

Results from these quantitative studies also appear to overlap with results from qualitative and intervention studies focused on adolescent youth in foster care that were gathered during the search process. For example, qualitative studies commonly highlighted the ways in which interpersonal resources (e.g., stable and supportive relationships with trusted adults and peers; see e.g., Greeson et al., 2015; Singer et al., 2013) contributed to youth's well-being and mental health. In addition, these qualitative studies often identified individual factors that were facilitators or barriers to more positive outcomes, and some qualitative studies concluded by providing specific recommendations for future work to focus on enhancing individual factors, such as developing youth skills (e.g., Ahren et al., 2011). Given our focus on direct associations between measurable psychosocial mechanisms and outcomes, we did not include qualitative studies in this scoping review. Nevertheless,

findings from qualitative studies are relevant for understanding resilience-promoting factors that may inform intervention development, and importantly, qualitative findings appear to complement and further support overall findings from this review of quantitative studies.

Similarly, a review of intervention findings was outside the analytic frame of this review, as interventions include a range of components targeting psychosocial mechanisms that cannot necessarily be disaggregated based on the published findings. In addition, Woodgate, Morakinyo and Martin (2017) conducted a recent review of interventions focused on youth aging out of foster care. They synthesized results of 68 articles focused on interventions (i.e., services, programs, and policies) designed to improve various outcomes including housing, employment, education, independent living, and health. Woodgate and colleagues (2017) concluded their review indicating that many of the studies were methodologically weak and that more rigorous testing is warranted. The review also emphasized the importance of interventions designed for youth in foster care to focus on soft skills, including interpersonal skills (Woodgate et al, 2017).

4.2. Gaps and Opportunities for Growth

This synthesis reflects the state of existing evidence, and also serves as a framework for applied researchers and practitioners interested in serving this population. The expert panel provided insights from their experiences to help refine the language of these categories based on their experiences and to make these categories more appealing to a broader audience. The expert panel also agreed that these categories will be helpful in identifying specific mechanisms to target (i.e., levers of change) to improve outcomes and facilitate positive developmental cascades for youth in foster care. In addition, this review reveals specific gaps or opportunities for growth in future work. There are three specific areas that are deserving of additional attention.

First, many existing studies were focused primarily on risks or problematic outcomes; however, there is a clear need to measure strengths, focus on strengths, and determine ways to bolster strengths for youth in foster care. To effectively and efficiently intervene, there is also a need to clearly understand preventative mechanisms. From a resilience perspective, these strengths are necessary above and beyond the absence of problems (Afifi & MacMillan, 2011; Benson & Scales, 2011). A deficit-based approach highlights important risk mechanisms but it also may perpetuate negative stereotypes (Benard, 2006), whereas a strength-based approach focuses on solutions and empowers people by highlighting their available assets, resources, and potential for taking control over their lives (Benard, 2006). Interestingly, even when positive aspects were measured in included studies, they were often measured with a few items (especially relative to risks measured) or from a measure focused on a more problematic outcome. For example, two studies that examined self-esteem with a subscale from a well-known depression inventory providing details about negative self-esteem. While findings from these studies are useful, they do not provide the detail necessary to understand the factors that contribute to positive self-esteem, self-concept and self-worth for adolescent youth in foster care.

Second, more work is needed to understand mechanisms that lead to positive psychosocial or resilient outcomes for adolescent youth in foster care across contexts and domains.

Additional effort is needed to truly understand specific individual factors and the qualities of relationships that are most helpful for adolescent youth in foster care, as well as how some youth may be differentially impacted. Social relationships are critical for youth's psychosocial outcomes and well-being, and these relationships may become challenging to maintain due to the instability many youth in foster care experience. When connections are disrupted, the ongoing relationships and connections youth are able to continue become even more critical. For example, Perry (2006) found that multiple strong support networks (across multiple domains including biological, foster, and peer networks) are needed before a preventative effect on psychological distress exists for adolescent youth in foster care. Future work should focus on the development and maintenance of important relationships, including developmental skill-building among youth who have experienced significant relationship disruption and the related impact on interpersonal efficacy. In addition, future work should continue to understand and differentiate specific relationships within these important relationship categories (e.g., paid vs. unpaid caring adults, siblings vs. peers). Longitudinal studies will also help to understand changes in individual and interpersonal factors over time and potential turning points for these young people.

Third, while the focus of this review was on modifiable individual or interpersonal factors, it is important to highlight the importance of other ecological layers likely impacting psychosocial outcomes for youth in foster care. Larger contexts and cultures (e.g., home life, school climate, neighborhoods and the child welfare system) are often outside of youths' control. These larger aspects were commonly mentioned in the studies included here, as well as in conversations with our expert panel, as important areas to also address in improving youth's psychosocial outcomes These contexts and institutions often influence youth outcomes and trajectories. Moreover, they often set the guidelines about the extent to which youth can be involved or participate in those institutions (e.g., a welcome, inclusive and trauma-informed school versus the alternative). In addition, stability (or instability, as it is commonly measured) becomes very important when examining adolescent outcomes among youth in foster care (Bederian-Gardner et al., 2018) and extant research has demonstrated the value of stable placements on youth outcomes.

4.3. Strengths and Limitations

This study has many strengths. This review articulates the current state of the science focused on proximal and modifiable individual and interpersonal factors among adolescent youth in foster care and identifies categories of mechanisms and relationships in youth-friendly language that will likely be helpful for researchers and practitioners to pursue. It also articulates gaps in knowledge and areas that should be further developed in order to continue to bolster strengths for adolescents in foster care.

This study, however, also has limitations. Despite careful thought identifying search terms and collating literature over a 20-year span, some studies focused on these topics might have been excluded due to the specific search strategies and databases used. If titles and/or abstracts did not clearly specify the specific terms we were looking for in this review, studies could have been missed at screening. Moreover, while attention was spent inviting a strong panel to serve as experts, including young adults with experience growing up in foster care

as well as adults who have extensive experience working with this population, those in this panel might not represent the views, voices and experiences of all youth in foster care, especially since these individuals were from one state in the Pacific Northwest. Multiple and diverse opportunities were provided to the expert panel to provide feedback, but that also does not necessarily equate to actually getting all insights they may have wanted to provide. Studies were also limited to those published in English which might have further limited the evidence included in this review, and which also resulted in a preponderance of US-based studies. While consensus was reached among key themes that emerged from this review across researchers and the expert panel, other individuals may have come to slightly different conclusions about primary factors, shared themes and/or gaps in the current evidence base. Lastly, as mentioned above, we excluded intervention studies and qualitative studies from this review for both conceptual reasons (to remain consistent in applying our analytic frame in a way that made sense for the majority of the articles) and practical considerations (to reduce the volume of articles included in the review). That said, this does potentially limit the generalizability of our findings.

4.4. Implications

Findings from this review have important implications for research, practice and policy focused on adolescent youth in foster care. As indicated above, future studies should develop and utilize strength-based measures. In addition to identifying and better understanding specific details within categories and devoting effort to more clearly understanding modifiable factors, research should also continue to understand the way in which youth's personal characteristics (e.g., age, race, gender, etc.) and environments (e.g., homes, schools, etc.) impact psychosocial outcomes. Additionally, research should continue to understand details from various reporting agents, but also incorporate voices of youth themselves, in measuring both identified independent and dependent variables. Lastly, as described above, this review revealed opportunities for improved measurement of youths' strengths and interpersonal assets that fit within a resilience framework. We encourage researchers to more intentionally measure strengths and focus efforts on identifying ways to promote positive outcomes of youth in foster care, so we can more fully understand factors that lead to more positive, resilient outcomes for youth in foster care.

The results of this review also have important implications for intervention development, practice and policy focused on adolescent youth in foster care. Using a prevention science approach, efforts should continue to focus on reducing risks, and more purposefully measuring and nurturing strengths and protective factors to improve youth's psychosocial outcomes. Implications and recommendations from these studies commonly mentioned opportunities for prevention and intervention and highlighted ways to better understand mechanisms for change (e.g., developing safe relationships, improving communication or involvement, providing resources and training to caregiving and caring adults so they can better support the youth in their care, and individualizing programming to cater to the diverse needs of youth in care). Additional efforts need to focus on unraveling the black box of youth-focused interventions for adolescents in foster care to better articulate the targeted mechanisms of change within and across interventions (e.g., Raghavan, Munson, & Le, 2019). Interventionists and practitioners developing programs need to develop and

utilize a theory of change, identify the specific ways the intervention is moving the needle and making an impact, and rigorously test whether change happened as expected and for whom. The authors are utilizing factors that emerged as promising modifiable factors in this scoping review to develop and test a group-based psychosocial intervention for foster youth focusing on increasing coping skills and self-efficacy, improving help-seeking attitudes, and strengthening supportive relationships. Such identification and measurement of targeted mechanisms will be helpful in understanding levers of change to improve psychosocial outcomes with this population.

4. 5. Conclusion

This scoping review confirms the importance of focusing on individual and interpersonal strengths in developing well-designed and rigorously-tested programming to nurture positive mental health and well-being outcomes for youth in foster care. The results of this review contribute new insights for research, practice,and policy intended to enhance psychosocial well-being for this population, and highlight specific individual and interpersonal factors that interventionists might consider as potential targeted mechanisms of change when developing programming. The ongoing effort to promote resilience in the face of significant adversity also requires collaboration between individuals (e.g., youth, their family members and service providers, etc.), researchers and practitioners, as well as across systems (e.g., child welfare, education, etc.), with common goals to increase normalcy, enhance networks, and ultimately improve positive outcomes for the priority population of youth in foster care.

Acknowledgments

References

Afifi TO, & Macmillan HL (2011). Resilience following Child Maltreatment: A Review of Protective Factors, The Canadian Journal of Psychiatry, 56(5), 266–272. 10.1177/070674371105600505 [PubMed: 21586192]

Ahrens KR, DuBois DL, Garrison M, Spencer R, Richardson LP, & 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(6), 1012–1023. 10.1016/j.childyouth.2011.01.006 [PubMed: 22661797]

*Ahrens KR, DuBois DL, Richardson LP, Fan M-Y, & Lozano P. (2008). Youth in Foster Care With Adult Mentors During Adolescence Have Improved Adult Outcomes. Pediatrics, 121(2), e246–e252. 10.1542/peds.2007-0508 [PubMed: 18182469]

Arksey H & O'Malley L. (2005). Scoping studies: towards a methodological framework. International Journal of Social Research Methodology, 8(1), 19–32.

*Bederian-Gardner D, Hobbs SD, Ogle CM, Goodman GS, Cordon IM, Bakanosky S, … Grp NCR (2018). Instability in the lives of foster and nonfoster youth: Mental health impediments and attachment insecurities. Children and Youth Services Review, 84, 159–167. 10.1016/j.childyouth.2017.10.019

Benson PL, & Scales PC (2011). Thriving and sparks. Encyclopedia of adolescence, 2963–2976. doi: 10.1007/978-1-4419-1695-2_199

*Blakely G, Leon S, Fuller A, & Jhe Bai G. (2017). Foster Care Children's Kinship Involvement and Behavioral Risks: A Longitudinal Study. Journal of Child & Family Studies, 26(9), 2450–2462.

*Blakeslee J, Kothari BH, McBeath B, Sorenson P, & Bank L. (2017). Network indicators of the social ecology of adolescents in relative and non-relative Foster households. Children and Youth Services Review, 73, 173–181. 10.1016/j.childyouth.2016.12.002 [PubMed: 28736465]

Braun V, & Clarke V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. doi:10.1191/1478088706qp063oa. hdl:2027.42/138221.

*Brook J, Rifenbark GG, Boulton A, Little TD, & McDonald TP (2015). Risk and Protective Factors for Drug Use Among Youth Living in Foster Care. Child and Adolescent Social Work Journal, 32(2), 155–165. 10.1007/s10560-014-0345-5

*Cooley M, Wojciak AS, Farineau H, & Mullis A. (2015). The association between perception of relationship with caregivers and behaviours of youth in foster care: a child and caregiver perspective. Journal of Social Work Practice, 29(2), 205–221.

Creswell John W. (1994). Research Design Qualitative and Quantitative Approaches. CA: USA: Sage.

*Diehl DC, Howse RB, & Trivette CM (2011). Youth in foster care: developmental assets and attitudes towards adoption and mentoring. Child and Family Social Work, 16(1), 81–92. 10.1111/j.1365-2206.2010.00716.x

*Farineau HM, Wojciak AS, & McWey LM (2013). You matter to me: important relationships and self-esteem of adolescents in foster care. Child and Family Social Work, 18(2), 129–138. 10.1111/j.1365-2206.2011.00808.x

*Farruggia SP, & Sorkin DH (2009). Health risks for older US adolescents in foster care: the significance of important others' health behaviours on youths' health and health behaviours. Child and Care Health Development, 35(3), 340–348. 10.1111/j.1365-2214.2009.00960.x

*Farruggia Susan P., & Germo GR (2015). Problem behavior among older youth in foster care: Examining gender. Children and Youth Services Review, 48, 20–30. 10.1016/j.childyouth.2014.11.005

*Gabrielli J, Jackson Y, Huffhines L, & Stone K. (2018). Maltreatment, coping, and substance use in youth in foster care: Examination of moderation models. Child Maltreatment, 23(2), 175–185. 10.1177/1077559517741681 [PubMed: 29166770]

*Goldstein AL, Faulkner B, & Wekerle C. (2013). The relationship among internal resilience, smoking, alcohol use, and depression symptoms in emerging adults transitioning out of child welfare. Child Abuse & Neglect, 37(1), 22–32. 10.1016/j.chiabu.2012.08.007 [PubMed: 23260123]

*Greeno EJ, Fedina L, Lee BR, Farrell J, & Harburger D. (2019). Psychological Well-Being, Risk, and Resilience of Youth in Out-Of-Home Care and Former Foster Youth. Journal of Child & Adolescent Trauma, 12(2), 175–185. [PubMed: 32318190]

Greeson JKP, Thompson AE, Ali S, & Wenger RS (2015). It's good to know that you got somebody that's not going anywhere: Attitudes and beliefs of older youth in foster care about child welfare-based natural mentoring. Children and Youth Services Review, 48, 140–149.

*Grey IK, Berzenski SR, & Yates TM (2015). Coping in context: Associations between resource availability and coping effectiveness among emancipated foster youth. Emerging Adulthood, 3(5), 295–305. 10.1177/2167696815576457

*Jackson Y, Huffhines L, Stone KJ, Fleming K, & Gabrielli J. (2017). Coping styles in youth exposed to maltreatment: Longitudinal patterns reported by youth in foster care. Child Abuse & Neglect, 70, 65–74. 10.1016/j.chiabu.2017.05.001 [PubMed: 28558324]

*Jones L. (2012). Measuring resiliency and its predictors in recently discharged foster youth. Child & Adolescent Social Work Journal, 29(6), 515–533. 10.1007/s10560-012-0275-z

*Joseph MA, O'Connor TG, Briskman JA, Maughan B, & Scott S. (2014). The formation of secure new attachments by children who were maltreated: An observational study of adolescents in foster care. Development and Psychopathology, 26(1), 67–80. 10.1017/S0954579413000540 [PubMed: 24169078]

*Keller TE, Blakeslee JE, Lemon SC, & Courtney ME (2010). Subpopulations of older foster youths with differential risk of diagnosis for alcohol abuse or dependence. Journal of Studies on Alcohol and Drugs, 71(6), 819–830. 10.15288/jsad.2010.71.819 [PubMed: 20946738]

*Leathers SJ (2006). Placement disruption and negative placement outcomes among adolescents in long-term foster care: The role of behavior problems. Child Abuse & Neglect, 30(3), 307–324. 10.1016/j.chiabu.2005.09.003 [PubMed: 16519937]

*Lee J, Powers L, Geenen S, Schmidt J, Blakeslee J, & Hwang I. (2018). Mental health outcomes among youth in foster care with disabilities. Children and Youth Services Review, 94, 27. 10.1016/j.childyouth.2018.09.025

Levac D, Colquhoun H, & O'Brien KK (2010). Scoping studies: advancing the methodology. Implementation Science, 5(1), 69–69. 10.1186/1748-5908-5-69 [PubMed: 20854677]

*Long SJ, Evans RE, Fletcher A, Hewitt G, Murphy S, Young H, & Moore GF (2017). Comparison of substance use, subjective well-being and interpersonal relationships among young people in foster care and private households: a cross sectional analysis of the School Health Research Network survey in Wales. BMJ OPEN, 7(2). 10.1136/bmjopen-2016-014198

*McMahon RC, & Fields SA (2015). Criminal conduct subgroups of "aging out" foster youth. Children and Youth Services Review, 48, 14–19. 10.1016/j.childyouth.2014.11.01039

*McMillen JC, Zima BT, Scott LD, Auslander WF, Munson MR, Ollie MT, & Spitznagel EL (2005). Prevalence of psychiatric disorders among older youths in the foster care system. Journal of the American Academy of Child & Adolescent Psychiatry, 44(1), 88–95. [PubMed: 15608548]

*McWey LM, & Cui M. (2017). Parent–Child Contact for Youth in Foster Care: Research to Inform Practice. Family Relations, 66(4), 684–695. 10.1111/fare.12276

*Mihalec-Adkins BP, & Cooley ME (n.d.). Examining individual-level academic risk and protective factors for foster youth: School engagement, behaviors, self-esteem, and social skills. Child & Family Social Work. 10.1111/cfs.12681

Munn Z, Peters MD, Stern C, Tufanaru C, McArthur A, & Aromataris E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. BMC medical research methodology, 18(1), 143. [PubMed: 30453902]

*Munson MR, & McMillen JC (2009). Natural mentoring and psychosocial outcomes among older youth transitioning from foster care. Children and Youth Services Review, 31(1), 104–111. 10.1016/j.childyouth.2008.06.003 [PubMed: 20046218]

*Narendorf SC, McMillen JC, & Oshima KM (2016). Affect Dysregulation in Older Foster Youth. Journal of Emotional and Behavioral Disorders, 24(4), 211–222. 10.1177/1063426615591791

*Okpych NJ, & Courtney ME (2018). The role of avoidant attachment on college persistence and completion among youth in foster care. Children and Youth Services Review, 90, 106–117. 10.1016/j.childyouth.2018.05.014

*Perry BL (2006). Understanding Social Network Disruption: The Case of Youth in Foster Care. Social Problems, 53(3), 371–391.

*Polgar M, & Auslander W. (2009). HIV Prevention for Youths in Foster Care: Understanding Future Orientation and Intended Risk Behaviors. Journal of HIV/AIDS & Social Services, 8(4), 397–413.

Raghavan R, Munson MR, & Le C. (2019). Toward an Experimental Therapeutics Approach in Human Services Research. Psychiatric Services, 70(12), 1130–1137. 10.1176/appi.ps.201800577 [PubMed: 31500543]

*Rayburn AD, Withers MC, & McWey LM (2018). The Importance of the Caregiver and Adolescent Relationship for Mental Health Outcomes Among Youth in Foster Care. Journal of Family Violence, 33(1), 43–52. 10.1007/s10896-017-9933-4

Salazar AM, Jones KR, Amemiya J, Cherry A, Brown EC, Catalano RF, & Monahan KC (2018). Defining and achieving permanency among older youth in foster care. Children and Youth Services Review, 87, 9–16. 10.1016/j.childyouth.2018.02.006 [PubMed: 29875523]

*Scott LD Jr., McCoy H, Munson MR, Snowden LR, & McMillen JC (2011). Cultural Mistrust of Mental Health Professionals Among Black Males Transitioning from Foster Care. Journal of Child and Family Studies, 20(5), 605–613. 10.1007/s10826-010-9434z

*Scott LD Jr, McMillen JC, & Snowden LR (2015). Informal and Formal Help Seeking Among Older Black Male Foster Care Youth and Alumni. Journal of Child and Family Studies, 24(2), 264–277. 10.1007/s10826-013-9832-0 [PubMed: 27134513]

*Shim-Pelayo H, & De Pedro KT (2018). The role of school climate in rates of depression and suicidal ideation among school-attending foster youth in California public schools. Children and Youth Services Review, 88, 149–155. 10.1016/j.childyouth.2018.02.033

*Shook JJ, Vaughn MG, Litschge C, Kolivoski K, & Schelbe L. (2009). The importance of friends among foster youth aging out of care: Cluster profiles of deviant peer affiliations. Children and Youth Services Review, 31(2), 284–291. 10.1016/j.childyouth.2008.07.024

Singer ER, Berzin SC, & Hokanson K. (2013). Voices of former foster youth: Supportive relationships in the transition to adulthood. Children and Youth Services Review, 35(12), 2110–2117. 10.1016/j.childyouth.2013.10.019

Solorio MR, Milburn NG, Andersen RM, Trifskin S, & Rodríguez MA (2006). Emotional Distress and Mental Health Service Use Among Urban Homeless Adolescents. The Journal of Behavioral Health Services & Research, 33(4), 381–393. 10.1007/s11414-006-9037-z [PubMed: 17061161]

Stoner AM, Leon SC, & Fuller AK (2015). Predictors of reduction in symptoms of depression for children and adolescents in foster care. Journal of Child and Family Studies, 24(3), 784–797. 10.1007/s10826-013-9889-9

Stott T. (2012). Placement instability and risky behaviors of youth aging out of foster care. Child and Adolescent Social Work Journal, 29(1), 61–83.

*Thompson HM, Wojciak AS, & Cooley ME (2016). Self-esteem: A mediator between peer relationships and behaviors of adolescents in foster care. Children and Youth Services Review, 66, 109–116. 10.1016/j.childyouth.2016.05.003

Ungar M. (2013). Resilience after maltreatment: The importance of social services as facilitators of positive adaptation. Child Abuse & Neglect, 37(2–3), 110–115. doi: 10.1016/j.chiabu.2012.08.004 [PubMed: 23260114]

Ungar M. (2018). The differential impact of social services on young people's resilience. Child Abuse & Neglect, 78, 4–12. 10.1016/j.chiabu.2017.09.024 [PubMed: 28943094]

*Van Ryzin MJ, Mills D, Kelban S, Vars MR, & Chamberlain P. (2011). Using the bridges transition framework for youth in foster care: Measurement development and preliminary outcomes. Children & Youth Services Review, 33(11), 2267–2272.

*Williams-Butler A, Ryan JP, McLoyd VC, Schulenberg JE, & Davis-Kean PE (2018). Relational Permanence and Psychological well-being among African American Adolescents in Foster Care. Journal of Child & Family Studies, 27(10), 3277–3287.

*Wojciak AS, McWey LM, & Helfrich CM (2013). Sibling relationships and internalizing symptoms of youth in foster care. Children and Youth Services Review, 35(7), 1071–1077. 10.1016/j.childyouth.2013.04.021

Woodgate R, Morakinyo O, & Martin K. (2017). Interventions for youth aging out of care: A scoping review. Children and Youth Services Review, 82, 280–300. 10.1016/j.childyouth.2017.09.031

*Yates TM, & Grey IK (2012). Adapting to aging out: Profiles of risk and resilience among emancipated foster youth. Development and Psychopathology, 24(2), 475–492. 10.1017/S0954579412000107 [PubMed: 22559125]

Yoshioka-Maxwell A, & Rice E. (2017). Exploring the impact of network characteristics on substance use outcomes among homeless former foster youth. International Journal of Public Health, 62(3), 371–378. 10.1007/s00038-016-0845-5 [PubMed: 27300076]

*Zinn A. (2017). Predictors of natural mentoring relationships among former foster youth. Children and Youth Services Review, 79, 564–575. 10.1016/j.childyouth.2017.07.004

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Highlights

- A synthesis of 41 studies revealed key factors related to psychosocial functioning

- Developing individual strengths, psychosocial needs, and developmental skills may improve outcomes

- Fostering relationships with peers/siblings, caregiving- and caring adults may improve outcomes

- Building individual factors also nurtures interpersonal factors and vice versa

- Implications for research and intervention programming are discussed
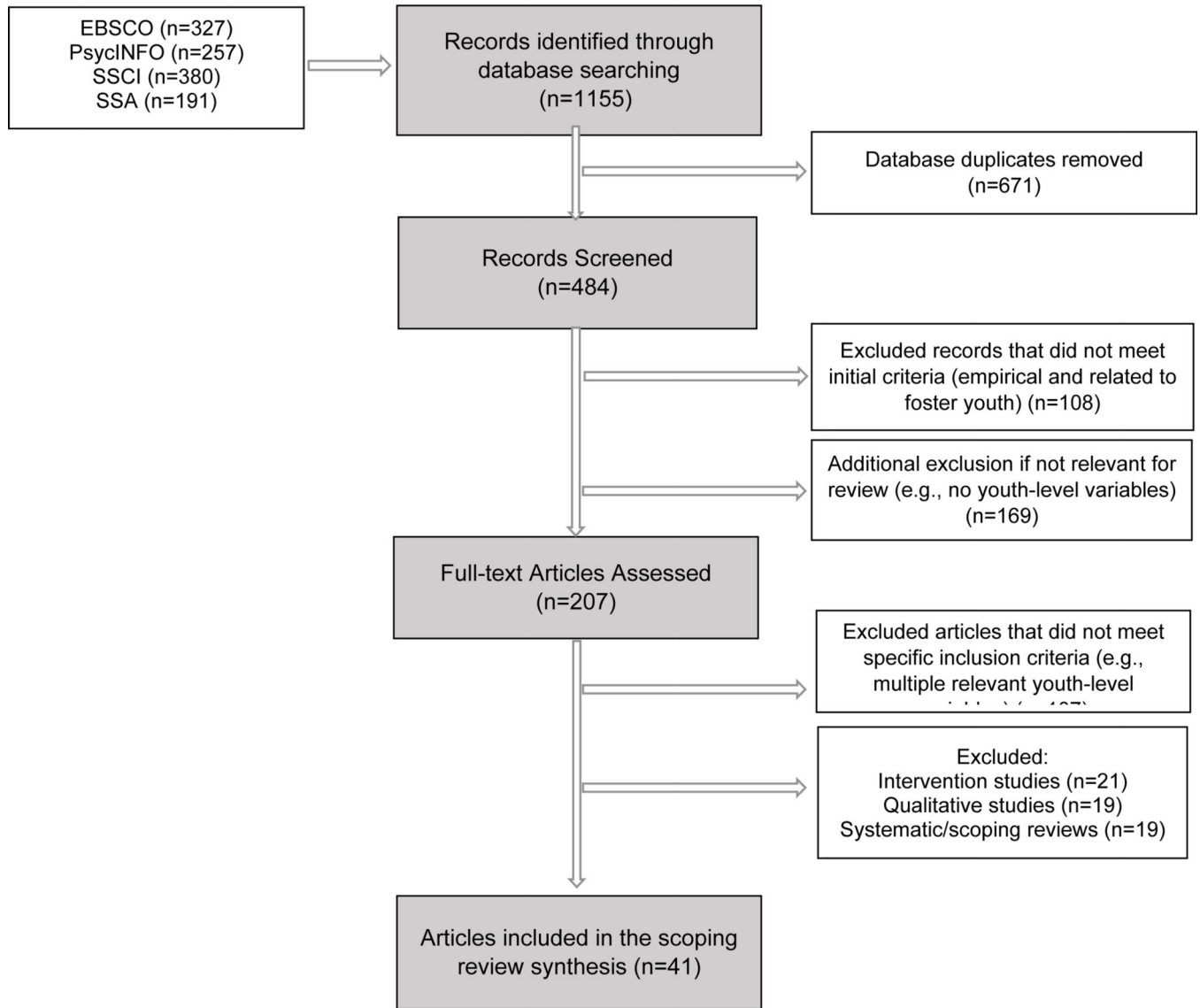
Figure 1.
Protocol for study selection for this scoping review.
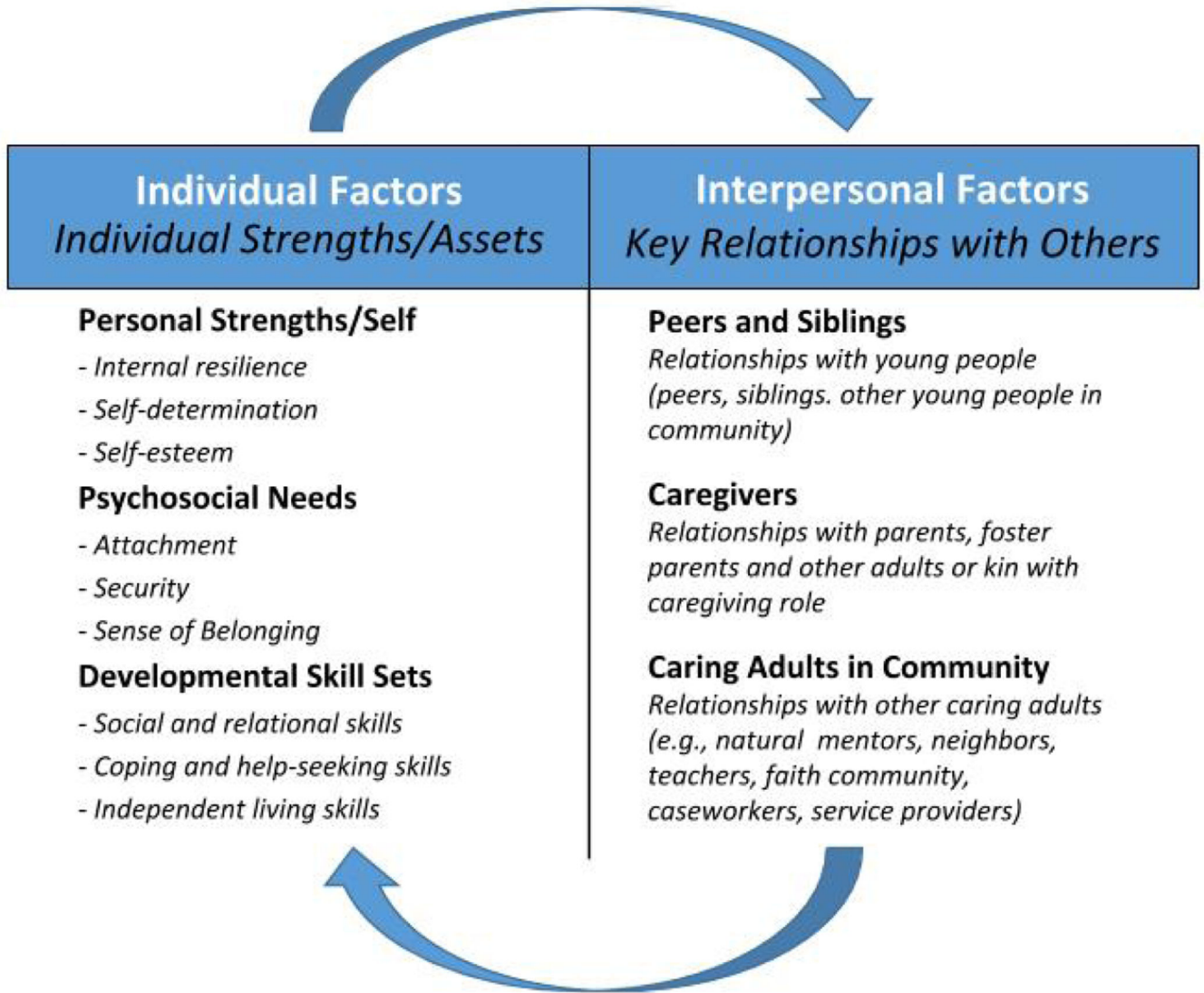
Figure 2.
Summary of Modifiable Individual and Interpersonal Factors for Adolescent Youth in Foster Care

Table 1

Included articles in scoping review focused on youth in foster care

Author(s)	Design	Sample	Key Modifiable Factors	Relevant Findings
Ahrens et al. (2008)	Longitudinal	n=310	Relationships with non-parental adult mentor	On average, mentored youth had a significantly greater number of positive health and mental health outcomes compared to youth in foster care without mentors
Bederian-Gardner et al. (2018)	Cross-sectional	n=146	Attachment; mental health	Instability was associated with PTSD symptoms for foster youth but not for non-foster youth. Findings indicated that instability was more strongly related to mental health problems than having a foster care experience.
Blakely et al. (2017)	Longitudinal	n=336	Individual Strengths, Kinship involvement	Having more individual strengths served a buffer between trauma experiences and risk behaviors. A buffer effect was found for kinship involvement; more kin and fictive kin involvement (e.g., phone calls, visits) was associated with relatively lower risk behavior trajectories.
Blakeslee et al. (2017)	Cross-sectional	n=143	Family network, quality of life, PTSD symptoms, hopelessness	More robust family networks (including relative foster parents and non-relative foster parents, birth parents, relatives, and siblings) were associated with decreased caregiver-reported post-traumatic stress symptoms.
Brook et al. (2015)	Cross-sectional	n=1595	Risk and protective factors: peers, community, school, and family	Both risk and protective factors are important, but risk factors may play a greater role in predicting drug use. Characteristics of youth's peer relationships were most strongly linked to risk and protective factors
Cooley et al. (2015)	Cross-sectional	n=188	Relationships with caregivers	Higher reports of positive relationships with caregivers predicted lower internalizing and external behaviors from caregiver perspective and lower internalizing from youth perspective.
Diehl et al. (2013)	Cross-sectional	n=54	Developmental assets, risk factors, perceived control, mentoring and adoption attitudes	Developmental assets were positively related to attitudes towards mentoring and adoption. Perceived control was negatively related to mentoring attitudes.
Farineau et al. (2013)	Cross-sectional	n=188	Peer and foster parent relationships, self-esteem	Relationships with foster caregivers and peers were both related to foster youth's self-esteem, but peer relationships had the greatest impact on youth's self-esteem.
Farruggia & Germo (2015)	Cross-sectional	n=188	Peer and biological parent relationships	Higher levels of warmth and acceptance from biological parents or peers buffered the effects of risk for problem behavior only when risk was low, but was associated with greater problem behavior when risk was high
Farruggia & Sorkin (2009)	Cross-sectional	n=188	Youth, peer, parent, and non-parent adult health behaviors	Health compromising behaviors of peers and important non-parental adults, but not parents, were associated with youth's health behaviors which in turn were associated with the physical health status of youth in foster care
Gabrielli et al. (2018)	Longitudinal	n=210	Coping behaviors	In moderation tests, only asocial coping provided a significant interaction effect for substance use behavior; substance use behavior did not moderate pathways between maltreatment and coping behavior.
Goldstein et al. (2013)	Cross-sectional	n=93	Internal resilience	Internal resilience was significantly associated with outcomes, and made a significant contribution to depression scores above and beyond child maltreatment.
Greeno et al. (2019)	Cross-sectional	n=37	Independent living preparation	For former foster youth, independent living preparation positively impacted well-being
Grey et al. (2015)	Longitudinal	n=172	Coping strategies	Youth reported increased depressive, anxiety, and/or substance use problems if they engaged in specific coping strategies in the absence of strategy-specific resources.
Jackson et al. (2017)	Longitudinal	n=542	Coping	Youth report flexibility in their coping approach and while most endorsed a preferred style, it varies across situations and over time. Coping styles were somewhat consistent across a 6-month

Author(s)	Design	Sample	Key Modifiable Factors	Relevant Findings
				period. Coping was not associated with age, maltreatment type, or type of stressful situation.
Jones (2012)	Cross-sectional	n=97	Independent living skills; social networks	Acquisition of independent living skills and strong social networks were associated with resiliency for former foster youth.
Joseph et al. (2014)	Cross-sectional	n=62	Attachment; relationship quality with foster parents	Half of foster youth had secure attachments to their foster parents (similar to comparison non-foster youth attachment to parents). Secure attachment was predicted by relationship quality and placement duration, associated with fewer disruptive behavior symptoms.
Keller et al. (2010)	Cross-sectional	n=732	Closeness to caregivers	Youth-reported closeness to caregivers was an important factor in relation to alcohol problems for White youth. Youth who didn't feel at all close to their caregivers were more than twice as likely to have alcohol problems and had the highest diagnosis rate.
Leathers (2006)	Longitudinal	n=179	Integration in home	Integration in the foster home (using foster parent and caseworker items) was predictive of placement stability and mediated the association between behavior problems and risk of disruption.
Lee et al. (2018)	Cross-sectional	n=305	Self-determination; social support; quality of life	Self-determination and social support were protective factors for reduced externalizing and internalizing behaviors and increased quality of life, but these associations are nonsignificant when risk factors are also included.
Long et al. (2017)	Cross-sectional	n=295 in foster care	Quality interpersonal relationships	Significant associations between foster care and outcomes were attenuated (substance abuse) or non-significant (life satisfaction) after accounting for relationship variables. Quality relationships may serve as a buffer for youth in foster care.
McMahon & Fields (2015)	Cross-sectional	n=730	Caregiver closeness	Alcohol and drug diagnoses, male gender, out of school status, and limited caregiver closeness appear to be related to criminal conduct among youth in foster care.
McWey & Cui (2017)	Cross-sectional	n=452	Parent-child contact	Youths' age, race, type of maltreatment and placement were associated with how often contact occurred with mothers and fathers. Youth with daily contact with mothers had statistically lower internalizing and externalizing behavior.
Mihalec-Adkins & Cooley (2019)	Cross-sectional	n=235	Self-esteem; social skills	Self-esteem mediated the association between school engagement and externalizing behavior (youth- and foster parent-reported), and social skills mediated between school engagement and externalizing behavior (youth- and foster parent-reported).
Munson & McMillen (2009)	Longitudinal	n=339	Long-term mentor	Having a long-term mentor was associated with positive psychological outcomes (less stress) and behavioral outcomes (less likely to be arrested)
Narendorf et al. (2016)	Longitudinal	n=329	Affect skills	Affect skills deficits were associated with more intensive psychiatric services, but affect instability was not
Okpych & Courtney (2018)	Longitudinal	n=732	Attachment; Perceived social support	Higher avoidant attachment at age 17–18 decreased the odds of college persistence and completion, controlling for demographics, educational factors, behavioral health, and foster care history. Outcomes were mediated by perceived social support.
Perry (2006)	Cross-sectional	n=154	Strong, supportive ties; network disruption	Strong and supportive ties with new members can replace weak or absent ties as a protective factor against psychological distress. Stronger biological and foster care networks are associated with less distress.
Polgar & Auslander (2009)	Longitudinal	n=168	Positive and hopeful future orientations; preventive attitudes	Future orientation is correlated with HIV-risk intentions (among young women in particular), but multivariate regression shows that only preventive attitudes and peer behaviors are simultaneously associated with risky intentions.
Rayburn, Withers, & McWey (2018)	Cross-sectional	n=175	Caregiver-youth relationship quality	Perceptions of emotional security in caregiver relationship mediated the effect of prior exposure to in-home violence on youth internalizing, externalizing, and trauma symptoms. Caregiver involvement and structure in the relationship also

Author(s)	Design	Sample	Key Modifiable Factors	Relevant Findings
				in-home violence and internalizing and externalizing, but not trauma symptoms.
Salazar et al. (2018)	Cross-sectional	n=97	Permanency goals, Relational permanency	Of eight conceptualizations of relational permanency assessed, sense of belonging was associated with achievement of the most key transition outcomes. Outcomes most associated with youth-reported permanency were physical and mental health.
Scott et al. (2015)	Cross-sectional	n=74	Emotional control; help-seeking	Among older, Black male foster youth, a lifetime mental health disorder predicted help-seeking. Predisposing factors for informal help-seeking are less emotional control and less frequent negative social contextual experiences. Predisposing factors for formal help-seeking: less cultural mistrust of mental health professionals, more tangible support, and more satisfaction with mental health services.
Shim-Pelayo & De Pedro (2018)	Cross-sectional	n=1,354	Caring relationships	Controlling for demographics, school connectedness and caring relationships were associated with reduced likelihood of depression tendency or suicidal ideation, while high expectations were associated with increased likelihood.
Shook et al. (2009)	Cross-sectional	n=404	Peer relationships, family support	Three profiles of low (28%)/moderate (58%)/high (14%) peer deviancy (PD). Youth with high PD more likely to be fired from a job, to not be enrolled in college, and to leave care before age 19. Differences also reported for those for moderate PD.
Tyrell et al. (2019)	Longitudinal	n=144	Positive feelings towards one's ethnic-racial group memberships	Maltreatment severity and placement disruption were associated with lower ERI private regard, but not ERI centrality. Moreover, private regard was associated with better socioemotional adjustment, whereas centrality was related to poorer psychosocial adjustment, and these relations varied by ethnicity-race.
Thompson et al. (2016)	Cross-sectional	n=181	Peer relationships, self-esteem	Peer relationships were associated with both caregiver AND youth-reported externalizing (−) and internalizing behaviors (−) and delinquency (−). Self-esteem did not mediate association between peer relationships and caregiver report of these behaviors, but it did mediate youth-reported behaviors.
Van Ryzin et al. (2011)	Longitudinal	n=569	Preparedness for change (openness)	Two subscales, openness and determination, were identified on Youth Experience of Transitions measures. An increase in openness between baseline and 6-month follow-up predicted decreased internalizing symptoms (no findings for externalizing).
Williams-Butler et al. (2018)	Longitudinal.	n=534	Stable relationships; relational permanence	No meaningful change in relational permanence over time (8 months). Higher baseline permanence and an increase over time predict psychological well-being at follow-up, regardless of interpersonal skills, or foster care history.
Wojciak et al. (2013)	Cross-sectional	n=152	Sibling relationship quality	More sibling contact is associated with better sibling relationship quality, which also mediated the relationship between trauma and internalizing.
Yates & Grey (2012)	Cross-sectional	n=164	Youth skills	Most youth have resilience in all or some domains, with only 17% maladapted.
Zinn (2017)	Longitudinal	n=683	Attachment, relationship quality	Having a mentor is predicted by insecure attachment (−), ever being in group care (−), social participation (religious/community) and/or working (+). Mentor closeness is predicted by insecure attachment (−). Some age/gender/race differences reported.

Note. Sample listed indicates the number of youth in foster care