

Natural mentoring among older youth in and aging out of foster care: A systematic review



Allison E. Thompson*, Johanna K.P. Greeson, Ashleigh M. Brunsink

University of Pennsylvania, School of Social Policy & Practice, USA

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ABSTRACT

Due to their histories of caregiver maltreatment, living instability, and potential attachment challenges associated with out-of-home care, older foster youth represent a particularly vulnerable group of adolescents at increased risk for a number of poor well-being outcomes. However, research supports the notion that a relationship with a competent, caring adult, such as a mentor, may serve protectively for vulnerable youth, and a nascent yet growing body of literature suggests that naturally occurring mentoring relationships from within youth's social networks are associated with improved outcomes among young people in foster care during adolescence and the transition to adulthood. This systematic review is the first to comprehensively identify, synthesize, and summarize what we currently know from nearly a decade of theories, concepts, and research findings pertaining to natural mentoring among adolescent youth in foster care. A bibliographic search of seven databases and personal outreach to mentoring researchers and practitioners through a national listserv yielded 38 English-language documents from academic sources and the gray literature pertaining to natural mentoring among older foster youth. We identified quantitative studies that have been conducted to test the theories and hypotheses that have emerged from the qualitative studies of natural mentoring among youth in foster care. Together, this literature suggests that natural mentoring is a promising practice for youth in foster care. Based on our findings from the systematic review, we make practice recommendations to encourage the facilitation of natural mentoring within child welfare contexts and outline an agenda for future research that more rigorously investigates natural mentoring among older youth in foster care.

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1. Introduction

Mentoring continues to gain national attention, momentum, and support as a practice for improving the well being of adolescent youth (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). Positive relationships with supportive, caring nonparental adults are both normative for youth in the general population as well as protective for marginalized youth who are at-risk for experiencing poor well-being outcomes (Zimmerman et al., 2013). Indeed, meta-analyses indicate a positive association between youth mentoring and improved psychosocial, behavioral, and academic outcomes (DuBois et al., 2011; Tolan, Henry, Schoeny, Lovegrove, & Nichols, 2014; Wood & Mayo-Wilson, 2012). However, across meta-analyses, the overall effect size (i.e., the impact of the average mentoring program in improving youth outcomes) is small. Both theory and empirical research suggest that more effective mentoring may be associated with the youth's previous attachments as well as the quality and longevity of the mentoring relationship (Rhodes, Spencer, Keller, Liang, & Noam, 2006). Thus, further

investigation is warranted into the types of mentoring relationships that best address these factors for specific sub-groups of marginalized youth.

Older youth aging out of foster care represent a unique marginalized group, and the formation of typical mentoring relationships with programmatically supported unfamiliar adults may be particularly challenging for these youth due to their experiences of past caregiver maltreatment, out-of-home placement, and living instability (*Greeson, 2013). Representing one in ten exits from foster care each year (U.S. Department of Health and Human Services, 2014), emancipating youth are at risk for increased rates of unemployment, low educational attainment, reliance on public assistance, behavioral health symptomatology, poor physical health, homelessness, unplanned pregnancy, and criminal justice involvement (Courtney & Dworsky, 2006; Dworsky & Courtney, 2010; Dworsky, Napolitano, & Courtney, 2013; Hook & Courtney, 2011; McMillen & Raghavan, 2009; Pecora et al., 2006). A growing body of theoretical, qualitative, and quantitative literature suggests that natural mentoring (i.e., the presence of a caring, supportive nonparental adult from within the youth's social network) may serve as a protective factor and may be a better fit for youth in foster care as compared to formally matched mentoring relationships with unfamiliar adults (*Britner, Randall, & Ahrens, 2013). This systematic

* Corresponding author at: University of Pennsylvania, School of Social Policy & Practice, 3815 Walnut Street, Philadelphia, PA 19104, USA
E-mail address: thompa@sp2.upenn.edu (A.E. Thompson).

review is the first to provide a comprehensive look at the present state of the literature pertaining to natural mentoring among older youth in foster care.

1.1. Background and significance

1.1.1. Youth mentoring

The popularity and proliferation of youth mentoring are evident by the number of mentoring programs, dollars spent, and national attention given to this topic area in the United States over the past decade. For example, the *Corporation for National & Community Service* (n.d.) estimates that approximately three million adults serve as volunteer mentors in formal programs across the nation. With more than 5000 mentoring programs, government agencies such as the Office of Juvenile Justice and Delinquency Prevention and the Departments of Health and Human Services, Education, and Labor collectively allocate hundreds of millions of dollars each year toward mentoring programs (DuBois et al., 2011). President Obama has also demonstrated support for mentoring interventions, and in February 2014, he launched *My Brother's Keeper*, an initiative that uses mentoring to ameliorate the opportunity gap experienced by many young men of color (Duncan & Johnson, 2015). Through Proclamation No. 9224, 3 CFR (2014), President Obama declared January 2015 National Mentoring Month stating, "Every day, mentors play a vital role in this national mission by helping to broaden the horizons for our daughters and sons." Indeed, numerous qualitative studies identify the role of mentoring as protective among at-risk youth (*Hass, Allen, & Amoah, 2014; Dallos & Comley-Ross, 2005; Graham, Schellinger, & Vaughn, 2015; Munson, Brown, Spencer, Edguer, & Tracy, 2014), and countless personal testimonies of successful adults pay tribute to their mentors (Harvard School of Public Health/MENTOR, n.d.; *Chronicle of Evidence-Based Mentoring*, n.d.)

Quantitative research supports a positive, though modest, association between nonparental adult mentoring and improved well-being outcomes among adolescent youth. For example, DuBois et al. (2011) conducted a meta-analysis of 73 independent evaluations of mentoring programs published from 1999 to 2010. Findings indicate a positive effect of mentoring programs across the domains of achievement motivation/prosocial attitudes, social/relational skills, psychological/emotional outcomes, behavior, and academic/school functioning. However, the average effect size across all studies was 0.21, which is considered to be a relatively small effect (Cohen, 1992). In terms of clinical significance, or the amount of change experienced in one's daily life due to mentoring, DuBois et al. (2011) conclude that such an effect size corresponds to the average mentored youth scoring roughly nine percentile points higher than the average non-mentored youth. In other words, although this meta-analysis found a statistically significant relationship between mentoring and positive outcomes (e.g., social, relational, emotional, behavioral and academic), the size of the average mentoring program's impact on youth outcomes was somewhat small.

Other meta-analyses have investigated the effects of general mentoring among sub-groups of youth and have also found small to moderate, positive effects. A meta-analysis of 46 studies investigating the impact of mentoring among juvenile delinquent youth found a positive effect in relation to improved delinquency outcomes, including aggression, drug use, and academic achievement (Tolan et al., 2014). Although the average effect sizes were statistically significant, they were small to moderate in size, ranging from 0.11 to 0.29. A smaller meta-analysis of school-based mentoring for adolescents included six studies and examined the impact of school-based mentoring on academic performance, attendance, attitudes, behavior, and self-esteem (Wood & Mayo-Wilson, 2012). Across studies, the post-treatment impact of school-based mentoring was only statistically significant for the measure of self-esteem, though the effect size was 0.09, which the authors conclude is trivial.

Although there is strong anecdotal and public support for mentoring among adolescent youth, quantitative meta-analyses continue to find

relatively small effect sizes in terms of positive outcomes associated with mentoring. Such analyses may be limited in their ability to detect substantial effects when such effects are diffused across many youth with varying personal characteristics, experiences, environmental contexts, and types of mentoring relationships. This quandary has spurred researchers to explore personal, environmental, and relational factors that may be associated with more effective mentoring strategies. Indeed, we need to better understand for whom various kinds of mentoring relationships are more effective and under what circumstances.

Both theory and empirical research provide some elucidation for understanding factors associated with effective youth mentoring. Rhodes' conceptual model of developmental youth mentoring (2006) posits that positive youth outcomes are contingent upon the presence of a close and meaningful relationship between the mentee and mentor. Through this caring relationship, mentors are well positioned to influence the youth's social-emotional, cognitive, and identity development, leading to improved well-being youth outcomes. Rhodes, Spencer, Keller, Liang, and Noam (2006) states,

Mentoring relationships are not all alike, and some are likely to have greater influence than others. Furthermore, mentoring is likely to work differently with different youth. We contend that the contribution of mentoring to the developmental processes outlined varies on the basis of a number of interrelated factors, including what the youth's preceding relationship history is, whether the relationship becomes close and meaningful to the youth, and how long the mentoring relationship lasts (p. 696).

Empirical studies support the notion that the youth's attachment style and relational history as well as the quality and longevity of the mentoring relationship are positively associated with mentoring effectiveness. For example, one study used an adapted version of the Attachment Style Questionnaire (ASQ), an instrument designed to measure attachment style in important relationships after and beyond childhood, to survey 569 high school students. Results indicated that youth with a more secure attachment style reported a stronger mentoring bond (Georgiou, Demetriou, & Stavrinides, 2008). Another study collected monthly data over a one-year period for 50 mentoring relationships and concluded that youth with relationships characterized by feelings of closeness experienced greater perceived benefits (Para, DuBois, Neville, Pugh-Lilly, & Povinelli, 2002). Likewise, Spencer, Basualdo-Delmonico, and Lewis (2011) conducted qualitative interviews with 13 parents of youth involved with a community-based mentoring program. Findings revealed that parents played a distinct role in the preservation and promotion of the mentoring relationship by acting as collaborators, coaches, or mediators for their child and mentor. Grossman and Rhodes (2002) investigated the impact of the duration of a mentoring relationship on youth outcomes among 1138 adolescents. Findings revealed that youth mentees in a relationship for at least a year reported the most favorable outcomes whereas youth who experienced relationships that terminated quickly reported a decline in functioning.

1.1.2. Natural mentoring among youth in foster care

Due to their histories of caregiver maltreatment, living instability, and ensuing attachment challenges associated with out-of-home care, older foster youth represent a particularly vulnerable group of adolescents (Muller-Ravett & Jacobs, 2012). For these youth, the achievement of factors associated with effective mentoring (e.g., enduring, close, meaningful, nonparental adult relationships) may be difficult to attain within the context of formal mentoring programs. Such programs (e.g., Big Brothers Big Sisters), typically match unfamiliar, volunteer adult mentors with youth mentees, but for youth in foster care, past relational trauma, placement moves, and disrupted relationships may make it difficult to form a social bond with an unfamiliar adult mentor (*Britner et al., 2013). For example, Rhodes, Haight, and Briggs (1999)

used a subset of data from a national study of formal mentoring relationships and found that foster youth had more difficulty with close relationships and trust, a requisite for establishing a social bond with a mentor, than their non-foster peers. Further research indicates that youth with histories of emotional, sexual, and physical abuse are more likely to experience early terminations of formal mentoring relationships, which has been shown to cause harm to youth (Grossman & Rhodes, 2002)

Natural mentoring has emerged as a promising approach for youth in foster care and has been shown to promote positive outcomes (*Britner et al., 2013). Because youth self-select supportive, caring adults from within their existing social networks, the enduring, quality bond associated with an effective mentoring relationship may already be established. For youth in foster care, this preexisting nonparental adult relationship may be particularly important, as the organically formed bond may be stronger and more likely to endure over time (*Greeson, 2013; *Spencer, Collins, Ward, & Smashnaya, 2010). Researchers have begun to investigate natural mentoring relationships as a mechanism that might facilitate a stronger, more enduring bond with a caring and supportive nonparental adult for young people in foster care (*Britner et al., 2013).

1.1.3. Present study

The study of natural mentoring among adolescent youth in foster care is nascent. Thus, the primary aim of this systematic review is to comprehensively identify, synthesize, and summarize what we currently know from theories, concepts, and research findings pertaining to natural mentoring among adolescent youth in foster care. To this aim, we reviewed theoretical and conceptual articles and qualitative, quantitative, and mixed-methods studies from both peer-reviewed and gray literatures. Based on our findings from the systematic review, a secondary aim of this study is to make practice recommendations and outline an agenda for future research investigating natural mentoring among older youth in foster care.

2. Method

2.1. Study eligibility criteria

To systematically identify articles related to natural mentoring among adolescent foster youth, five inclusion criteria were established for the review. First, only articles written in the English language were included. Second, we included articles published through June 1, 2015. Third, both peer-reviewed articles and work from the gray literature were included. Fourth, we included quantitative, qualitative, and mixed-methods studies as well as theoretical and conceptual work, reports, policy briefs, and literature reviews. Fifth, articles were only included if they pertained to natural mentoring among adolescents or emerging adults (ages 13–25) with foster care involvement or histories of foster care involvement. Natural mentoring was defined as the presence of a supportive, caring relationship with a nonparental adult (other than a peer, spouse, or present caregiver) from within a youth's existing social network.

Because the study of natural mentoring among adolescent and young adult foster youth is nascent, we attempted to be as comprehensive and inclusive as possible with regard to our literature search. Thus, we did not impose a limit in terms of how far back we searched for relevant material. Similarly, because the field is still forming, we expanded our criteria beyond quantitative studies typically included in a systematic review to include qualitative studies, theoretical and conceptual frameworks, and documented expert opinion and recommendations via reports, policy briefs, and non-peer reviewed outlets. There is precedent for including non-study materials in a systematic review (Campbell et al., 2014), particularly when the theoretical and conceptual frameworks for understanding a phenomenon are in the process of establishment. Indeed, various forms of mentoring among youth in

foster care are not well understood, and thus, the inclusion of non-study work is warranted. Additionally, best practice for systematic reviews includes non-peer reviewed materials from the gray literature, such as work produced by research institutes, think tanks, and government departments (University of Michigan, n.d.), many of which we included in our review.

2.2. Literature search and data collection

2.2.1. Literature search

Through consultation with a university social science reference librarian, the following seven electronic databases were used to conduct our search: (1) PsycInfo, (2) Scopus, (3) Social Services Abstracts, (4) PubMed Central, (5) Web of Science, (6) Google Scholar, and (7) ProQuest Dissertations and Theses. The use of Google Scholar was included in our literature search in order to better identify work in the gray literature. The search string used for all databases except Google Scholar was ["Aging out youth" OR "foster youth" OR "transitional age youth" OR "older youth" OR "emancipated youth"] AND ("Natural mentoring" OR "important nonparental adult" OR "youth initiated mentoring" OR "supportive nonparental adult"). Because Google Scholar limits the number of characters in its search engine, we used the following search string for Google Scholar only: [ti:"Aging out youth" OR "foster youth" OR "transitional age youth" OR "older youth" OR "emancipated youth" "natural mentoring"]. In addition to searching electronic databases, we conducted hand-searching through expert consultation via a national mentoring listserv and known researchers in the field of natural mentoring among youth in foster care.

2.2.2. Data collection

The search and data collection procedure is outlined in Fig. 1. As indicated, 448 articles were retrieved from 7 electronic databases using the search strings listed above. During round one, we excluded 384 articles that did not meet the inclusion criteria or were duplicates based on a review of the titles and abstracts. Sixty-four articles were retained, and after hand searching through expert consultation, nine additional articles were included for the next round of the review. During round two, we reviewed the full texts of 73 articles with oversight from the second author, who is an expert in the field of natural mentoring among older foster youth. Based on consensus between the authors, thirty-five articles were then excluded from the review. The most common reasons for exclusion were: (1) natural mentoring was not included in the article/study or was defined differently from the inclusion criteria, and (2) natural mentoring was included in the article/study but was not measured, analyzed, or discussed as an *exclusive* category. A final total of 38 articles and studies were included in the systematic review, and a data extraction form was applied to these articles by the authors. The data extraction form was used to gather information about: (1) the date, type, and source of publication, (2) the definition and term(s) used for natural mentors, (3) the study design and sample, (4) the findings and conclusions of the work, (5) the implications and recommendations, and (6) the limitations. Data collection and analysis were facilitated through the use of Microsoft Excel and Word software.

3. Results

As noted, the electronic bibliographic search and hand-searching techniques yielded 38 relevant manuscripts published between 2006 and 2015. Further review of the documents revealed that 23 (61%) were articles published in peer-reviewed journals, 5 (13%) were doctoral dissertations and the others ($n = 10$; 26%) were from non-peer reviewed sources (e.g., policy report, magazine article, online interview, book chapter). Publications were dispersed across the nine-year time span with roughly half published between 2006 and 2011 and half published between 2012 and 2015. Among the published studies, 13 journals were represented, including journals specializing in the fields

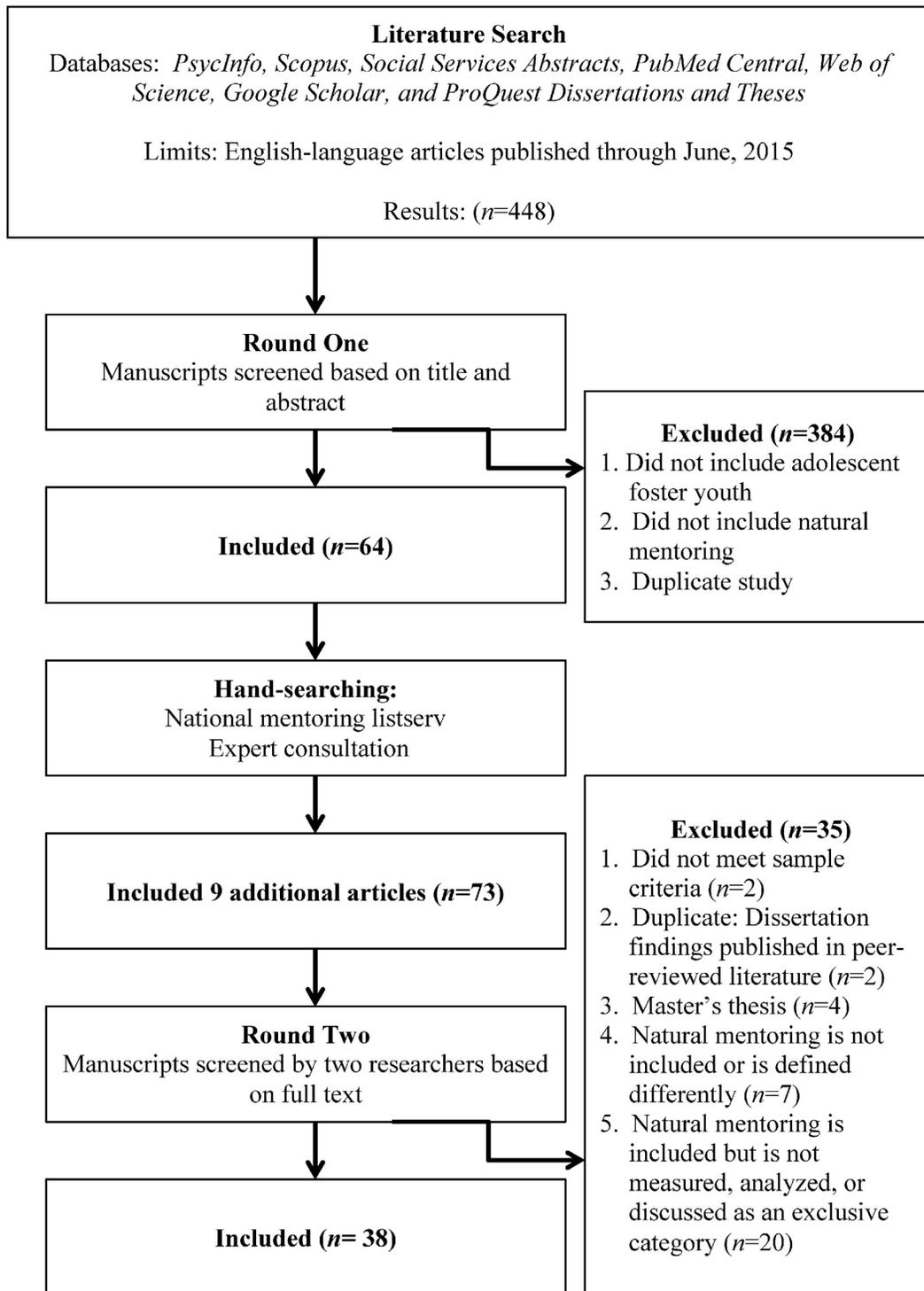


Fig. 1. Flow diagram of study selection protocol.

of pediatrics, psychology, social work, and family studies. The majority of articles ($n = 10$; 43%) were published in *Children and Youth Services Review*.

3.1. Study methodology

The articles reviewed were evenly dispersed between study designs, with 12 employing quantitative ($n = 9$) or mixed ($n = 3$) methods, 13 utilizing qualitative methods, and 13 contributing non-studies (e.g., conceptual or theoretical work). Of the quantitative publications,

four employed secondary data analyses from datasets such as the British Columbia Adolescent Health Study and the National Longitudinal Study of Adolescent to Adult Health, and the other five used primary data collection through surveys and questionnaires. The majority of quantitative studies ($n = 6$) relied on cross-sectional data, with three analyzing longitudinal datasets. All publications employing mixed methodologies ($n = 3$) utilized cross-sectional data and some combination of surveys, administrative data, and interviews. The majority of the qualitative studies implemented in-depth interviews ($n = 8$; 62%), with some employing focus groups ($n = 3$), one using thematic review to

Table 1
Quantitative studies: foster youth and natural mentoring.

Authors (year)	Study design, setting, and sample	Key findings
*Ahrens et al. (2008)	• Secondary analysis of a nationally representative sample of 310 foster youth (160 mentored, 150 non-mentored) in grades 7–12	• Natural mentoring associated with higher education and favorable overall health, and decreased likelihood to report suicidal ideation, having received a diagnosis of a sexually transmitted infection, and having hurt someone in a fight in the past year
*Collins et al. (2010)	• Mixed methods study (surveys and interviews) in one state in the Northeast among 96 former foster youth aged 19 or older	• Natural mentoring associated with greater likelihood to complete high school or have a GED, less likelihood to experience homelessness since 18, and marginally associated with feeling sad or hopeless
*Collins et al. (2007)	• Mixed methods study in Massachusetts; data included administrative records for 812 youth (age 18+), 96 youth surveys, 16 youth interviews, and 30 stakeholder interviews	• Natural mentors characterized by acceptance of the youth, constant encouragement, reliability and ability to provide assistance when needed
*Cushing et al. (2014)	• Secondary analysis of survey data from 153 22-year old youth from a specialized foster care program for youth with histories of RTF and multiple failed placements	• 69% of youth interviewed reported a natural mentoring relationship which was likely to have been in place for many years
*Diehl, Howse and Trivette (2011)	• Mixed methods study (interviews and surveys) of 54 adolescents from a camp-based program for foster youth ages 10–17	• Most common natural mentors included teachers, coaches and other community members such as church-goers
*Farruggia et al. (2006)	• Survey of 326 youth age 17 or older (163 active foster youth; 163 matched, non-foster youth) from Los Angeles County	• Stakeholders reported serious concern for youth who lack unpaid, caring adults upon exiting foster care
*Greeson et al. (2010)	• Secondary analysis of a nationally representative sample of 8142 youth (165 former foster youth; 7977 non-foster youth)	• Youth who are able to cultivate multiple sources of support and/or care from adult relationships were more likely to experience resilience
*Jones and LaLiberte (2013)	• Validation study of the <i>Youth Connections Scale</i> among 53 foster youth ages 15–21	• Youth with minimal connections to parents and parental figures, such as natural mentors, were most vulnerable in adulthood
*Mota and Matos (2015)	• Questionnaires among 246 Portuguese youth living in institutions due to parental neglect or abandonment	• Legal permanence had only a modest role in positive adult functioning, and factors associated with the presence of relational permanence were more salient for youth in foster care
*Munson and McMillen (2009)	• Longitudinal survey of 339 Missouri foster youth conducted every 3 months from the youths' 17th to 19th birthdays	• Positive association between youth's perceived quality of their natural mentoring relationships and their perceptions of their own strengths and assets
*Munson and McMillen (2008)	• Surveys of 211 Missouri foster youth nearing their 17th birthday who identified a nonkin natural mentor; youth were interviewed a second time nearing their 18th birthday	• Youths' perception of control was negatively related to mentoring attitudes
*Smith, Peled, Poon, Stewart, Saewyc and McCreary Centre Society (2015)	• Secondary analysis of data from 1300 current or former foster youth in grades 7–12 from British Columbia, Canada	• White youth and females exhibited more positive attitudes about mentoring
		• Foster youth more likely to report support from a natural mentor than non-foster youth
		• Foster youth more likely to report warmth and acceptance from a natural mentor than peers and parents compared to non-foster youth who reported more from parents
		• Foster youth less likely to involve natural mentors in problem behavior than non-foster youth
		• Among former foster youth, having a natural mentor and the natural mentor characteristic of <i>role model</i> were significantly associated with having a bank account, and the characteristic of <i>like a parent</i> was significantly associated with increased income expectations
		• Results indicated that the Youth Connections scale, a tool developed to measure youth connectedness as a component of relational permanence for youth in out-of-home placement, demonstrates high reliability and validity
		• Positive association between natural mentoring relationships and improved psychological well-being and resilience; resilience partially mediated the relationship between quality of the natural mentoring relationship and psychological well-being
		• Natural mentoring associated with lower levels of stress, higher life satisfaction, fewer depression symptoms, and decreased likelihood of arrest
		• Compared to white youth, nonwhite youth were less likely to nominate natural mentors
		• Of youth who reported having a natural mentor, 46% reported meeting through informal pathways and 51% reported through formal pathways; 70% of the youth had known their natural mentor for more than 1 year, and 56% knew them for more than 2 years
		• Foster youth in independent living were more likely to nominate natural mentors but less likely to report relationships for more than a year compared to those living with relatives
		• 54% of youth participants age 16+ reported a natural mentor in their community
		• Youth in rural areas more likely to have a natural mentor than youth in urban areas
		• Youth with natural mentors more likely to think they would be in school in five years
		• Positive association between natural mentoring and plans to pursue post-secondary education
		• No youth with natural mentors planned to drop out of high school vs. 17% without a mentor

analyze content from published articles between 2001 and 2013, and one utilizing secondary analysis of previously collected youth interview data. Eleven of the thirteen qualitative publications relied on cross-sectional data, with two using longitudinal data. All dissertations reviewed were qualitative studies.

Among the non-study publications, two were book chapters, two were literature reviews, six were journal or magazine articles, two were policy reports, and one consisted of an online interview with a respected mentoring researcher. The book chapters were included in the *Handbook of Youth Mentoring* and *The Oxford Handbook of Emerging Adulthood*. Literature reviews spanned the years 1977 to 2010. Of the journal and magazine articles, three provided theoretical frameworks while three were conceptual analyses of topics related to natural mentoring for adolescent foster youth.

3.2. Sample and setting

A key inclusion criteria for the review required that publications pertain to natural mentoring among adolescent foster youth, defined by the authors as the presence of a supportive, caring relationship with a nonparental adult (other than a peer, spouse, or present caregiver) from within a youth's existing social network. As an emerging area of research, a diversity of terms and definitions were utilized for identifying these relationships within the reviewed publications. The majority of documents ($n = 21$) referred to these relationships as *natural mentors*, while four used the more general term, *mentor*. Other terms used to describe these relationships included *permanency* or *relational permanency* ($n = 3$), *caring adult* ($n = 2$), and *social capital* ($n = 2$). Used once each were *very important nonparental adult*, *turnaround people*, *resource rich adults*, *significant figures*, and *emotional attachments*. Further, a number of studies used multiple terms interchangeably. Key themes were identified in the various definitions used for natural mentors, with the majority ($n = 19$) containing a specific designation of *nonparental*. Twelve definitions made reference to consistent support, whether financial, physical or emotional; eight specified the mentor as part of a youth's existing social network; six designated the mentor as older than the youth; five indicated the relationship was *naturally occurring* or *non-formal*.

The samples examined by the 25 studies varied in setting, size, age and location. In terms of settings for data collection, interviews, focus groups, and surveys were conducted by phone and in person at schools, community-based locations (e.g., youth's home, camp), and in child welfare agency settings. Sample sizes ranged widely from 16 to 8142 for quantitative and mixed methods studies; for qualitative studies, the samples ranged from 4 to 189 participants. The ages of the adolescents ranged from 10 to 29, with the majority ($n = 13$) focusing on youth 18 and older. Ninety-two percent of the studies ($n = 23$) were set in the United States; one included youth from British Columbia, Canada, and one included youth from Portugal. Within the United States, California was the most represented ($n = 4$) followed by Missouri ($n = 3$), Massachusetts ($n = 2$), Texas, Michigan and Washington (each, $n = 1$). For studies that did not specify location within the U.S., three designated northeast, and one each southeast, southwest and New England. Three studies did not specify where in the U.S. their samples were drawn, while two were nationally representative samples.

3.3. Findings and conclusions

3.3.1. Quantitative and mixed-method studies

The twelve studies identified in Table 1 utilizing quantitative and mixed methodologies found a positive association between natural mentoring and improved adjustment among foster youth during their transition to adulthood (e.g., completing a high school diploma or GED, avoiding vulnerability in adulthood, a heightened view of one's strengths and assets, improved psychological well-being and the development of resilience). Further, naturally mentored foster youth were

more likely to report favorable health, pursue higher education, experience less stress, exhibit resilience, and have a bank account. Although foster youth with natural mentors were less likely to report suicidal ideation, one study found a surprising, marginally significant trend: naturally mentored youth were more likely to report feeling sad or hopeless than non-mentored youth (*Collins et al., 2010). The authors suggest that the directionality of the relationship between the presence of a natural mentor and outcome be considered. In other words, perhaps natural mentors more often pursue youth who are struggling with feelings of sadness or hopelessness, leading to the increased likelihood of a natural mentoring relationship among more vulnerable youth. Although each of the twelve studies found positive associations between the presence of a natural mentor and improved outcomes among current and former foster youth, only one of the twelve studies reported effect sizes (i.e., *Greeson et al., 2010). Among former foster youth, *Greeson et al. (2010) reported large effects regarding the amount of variance predicted by the independent variables of natural mentoring, number of natural mentor functional roles, and natural mentor relationship strength on the dependent variables of increased assets among former foster youth. In terms of demographic characteristics, foster youth with natural mentors, or with more positive attitudes toward natural mentoring, were more likely to be female, white, not living with relatives, and living or have lived in a rural area. Youth in foster care described their natural mentors as *accepting*, *reliable*, *encouraging*, and *able to provide financial and/or emotional assistance*. Youth further noted that natural mentors were likely to have been in their lives for many years.

3.3.2. Qualitative studies

Eight of the thirteen qualitative studies identified in Table 2 conclude that having a mentor may be important, or even vital, for foster youth during the transition to adulthood. Similar to the quantitative studies, six of the qualitative publications report longevity and/or consistency to be important characteristics of natural mentoring relationships, with four emphasizing that natural mentors are viewed as *caring* or *like a parent* by foster youth. Two studies found a negative correlation between the age of the youth's entrance into foster care and the achievement of positive well-being outcomes during the transition to adulthood (i.e., youth who enter care at an older age tend to experience less favorable outcomes), suggesting this may be due to a lack of long-term, supportive relationships. However, *Ward (2009) found that youth who stay in care longer have stronger relationships with adults who might be able to help them during their transition to adulthood; *Williams (2012) suggests that permanency is a process that develops over time, positing that earlier permanency may lead to better outcomes.

3.3.3. Conceptual and theoretical publications

The majority of the thirteen non-study publications found in Table 3 assert that for older foster youth, natural mentoring may be positively associated with improved adult functioning, such as the promotion of healthy behaviors, educational success, improved self-esteem and the development of resilience. Two publications suggest that natural mentoring may act as a buffer against mental health symptomatology, and another two publications highlight the importance of extracurricular activities in the development of naturally occurring, supportive mentors in the lives of foster youth. *Richmond (2015) posits that many states are under-utilizing the funds available for extracurricular activities for foster youth, and suggests some may not be aware of the possibility of such use. She further states that ensuring access to extracurricular activities is a "common-sense way" to ensure that youth have opportunities to connect with supportive, trusted adults (*Richmond, 2015). *Gilligan (2007) also notes that *spare time activities* offer foster youth access to nonparental committed adults, such as natural mentors, and suggests that such activities be used as a tool for naturally developing these relationships.

Table 2
Qualitative studies: foster youth and natural mentoring.

Authors (year)	Study design, setting, and sample	Key findings
*Ahrens et al. (2011)	• Semi-structured individual interviews of 23 former foster youth aged 18 to 25 in Seattle, WA.	<ul style="list-style-type: none"> • Barriers to natural mentoring among foster youth included youth's fears of being hurt and limitations in natural mentors' interpersonal skills • Facilitators of natural mentoring among foster youth included patience from the adult, some degree of commonality between mentor and youth
*Croce (2013)	• Interviews of 11 former foster youth who had lived in Michigan (both urban and rural areas) and had aged out of the system at age 18.	<ul style="list-style-type: none"> • Natural mentors were of particular importance to these youth aging out of care • 8 of 11 youth reported a natural mentor as a significant help during their transition out of care, 7 of whom had known their natural mentors for 2+ years • Some youth initially denied having a <i>mentor</i>, but then described having an important, helpful nonparental adult, suggesting confusion surrounding this term
*Hedenstrom (2014)	• Phenomenological interviews of 9 young adults ages 20–25 in the Southwest region of the United States who were former foster youth and had aged out of care	<ul style="list-style-type: none"> • Natural mentoring described as a key factor in a successful transition out of care; youth both passively received natural mentoring support and actively pursued it during their transition from state care • Natural mentoring supports included telephone contact and emotional or informational support as well as material or financial support
*Hiles et al. (2013)	• Document review of 47 research publications relating to young people's experiences of social support during their transition from state care	<ul style="list-style-type: none"> • Natural mentoring relationships were characterized more by emotional support whereas professional relationships were described as practically supportive • Longevity and consistency were important in both types of relationships
*Greeson and Bowen (2008)	• Semi-structured individual interviews of 7 female, foster youth of color ages 13–20 from a New England public school	<ul style="list-style-type: none"> • Natural mentoring relationship characteristics that matter to youth include trust, love and caring, like parent and child; supports included emotional, informational, appraisal, and instrumental support
*Greeson et al. (2015a)	• Focus groups of 17 youth in foster care ages 15–21 at an urban charter high school in the Northeast U.S. that exclusively enrolls youth in foster care	<ul style="list-style-type: none"> • Youth reported a need for permanent relationships with caring adults • Natural mentors described as trustworthy, like a family member, role models, and mutually meaningful; limited support networks posed a challenge for natural mentoring relationships
*Greeson et al. (2015b)	• Focus groups of 20 child welfare professionals in the Northeastern U.S. who had served at least 1 youth age 15 years or older who was likely to age out of foster care	<ul style="list-style-type: none"> • Noted the time limited role of paid professionals and the authentic, enduring support that natural mentors could provide in light of this • Importance of youth perspective, child welfare agency climate, and case-worker buy-in when implementing a child welfare based natural mentoring program
*Hass et al. (2014)	• Phenomenological semi-structured individual interviews of 19 youth who successfully transitioned out of foster care in Orange Co., CA	<ul style="list-style-type: none"> • Natural mentors were characterized by their care, empathy, and advocacy • Provided instrumental support (e.g., career advice, college access, and financial support) and were reported to help facilitate a turning point in the youth's life
*Lenz-Rashid (2009)	• Interviews and focus groups of 27 young adults who had aged out of foster care system from CA counties trained in the California Permanency for Youth Project model or the Family Finding model	<ul style="list-style-type: none"> • Lack of support from child welfare workers regarding making connections to family or other adults while in care • Multiple placements, group homes and restrictive foster home placements, and mental health diagnoses negatively impacted permanency • CASA and social workers were identified as natural mentors, though these relationships often ended after youth aged out of care
*Munson et al. (2010)	• Open-ended individual interviews of 189 Missouri foster youth who had reported the presence of a non-kin natural mentor at age 19	<ul style="list-style-type: none"> • <i>Friend of the family</i> and <i>staff at former placement</i> were most common natural mentor relationships and were characterized by trust, empathy, and authenticity • The nature of the support included keeping the youth <i>on track</i>, instrumental or tangible support, informational support (i.e., advice), and emotional support
*Ward (2009)	• Secondary analysis of semi-structured interview transcripts from 16 young adults in Massachusetts who returned to the Department of Social Services after 18	<ul style="list-style-type: none"> • Access to social capital is essential for aging out youth • Youth who age out early, or ran away, did not have as strong relationships with adults, either at the child welfare agency or in the community; youth who stayed in foster care longer tended to have better connections with natural mentors
*Williams (2012)	• Phenomenological study of 16 aged out foster youth ages 16–21 from the six counties of the San Francisco/Bay Area of California	<ul style="list-style-type: none"> • Quality of mentoring relationships were based on adults being consistently available to assist youth in their time of need, to listen, provide advice, participate in bonding activities, and commit to supporting them
*van Rensburg (2011)	• Phenomenological interviews of 4 young adults ages 18–29 in a small, southwestern city in Texas who had lived in foster care for a minimum of five years and had aged out of the foster care system into independent living	<ul style="list-style-type: none"> • The majority of skills needed for independent living were not learned in a systematic manner, but instead somewhat "whimsically" from foster parents or natural mentors (e.g., friends' parents, caseworkers) • Participants formed trusting relationships with adults while in care, which were resources to them during the transition to adulthood

3.3.4. Summary of findings

As a whole, studies included in this review found a positive association between the presence of a natural mentor and positive well-being outcomes among foster youth (see Tables 1–3). Central themes that emerged include the importance of natural mentoring relationships during foster youth's transition to adulthood as well as into adulthood, with many studies reporting a positive relationship between natural mentoring and improved psychosocial, behavioral, or academic

outcomes (*Ahrens et al., 2008; *Avery, 2011; *Britner et al., 2013; *Collins et al., 2010; *Courtney, 2009; *Croce, 2013; *Cushing et al., 2014; *Diehl, Howse, & Trivette, 2011; *Farruggia et al., 2006; *Gilligan, 2007; *Greeson et al., 2010; *Greeson & Bowen, 2008; *Greeson et al., 2014; *Hedenstrom, 2014; *Hiles et al., 2013; *Munson & McMillen, 2008; *Munson & McMillen, 2009; *Mota & Matos, 2015; *Spencer et al., 2010; *Ward, 2009; *van Rensburg, 2011). Studies found that longevity and consistency were important traits in quality natural mentoring relationships (*Ahrens et al., 2008; *Croce, 2013;

Table 3

Non-study publications: foster youth and natural mentoring.

Authors (year)	Type of publication	Conclusions and recommendations for natural mentoring among foster youth
*Avery (2011)	• Literature review	• Having a natural mentor during adolescence is likely to have a modestly positive impact on youth functioning, with slightly larger effects anticipated for youth specifically identified as at risk. Recommendations include nation-wide extension of foster care to age 21 as well as a rebranding of independent to interdependent living.
*Britner et al. (2013)	• Book chapter	• The authors conclude that natural mentoring relationships have been shown to promote healthy behaviors and positive outcomes for many youth. They encourage agencies to systematically incorporate natural mentoring into their practice for older foster youth, positing that it may be more effective than formal mentoring.
*Courtney (2009)	• Policy report	• Interventions to foster the development of lasting connections between foster youth and unrelated adults should be done with caution, as many youth have had multiple failed relationships while in care. Future research should focus on how natural mentoring relationships are formed and maintained by foster youth, and programs intended to create new supportive relationships for foster youth should be rigorously evaluated.
*Gilligan (2007)	• Theoretical framework	• Literature suggests that <i>spare time activities</i> offer youth access to potential natural mentors, and these relationships may lead to better outcomes (e.g., educational success, social-emotional well-being, connections to social capital, positive risk-taking behavior), which may be particularly beneficial for foster youth.
*Greeson (2013)	• Theoretical framework	• Drawing from the life course and the resilience perspectives, the author offers potential challenges and opportunities related to aging out of foster care (i.e., helping older foster youth cultivate natural mentor relationships is potentially an effective strategy for promoting resilience). The article contains a theory of change for a child welfare-based natural mentoring intervention, C.A.R.E., and the author offers practice and research recommendations for more intentionally embedding natural mentoring in child welfare settings.
*Greeson and Thompson (2015)	• Book chapter	• This chapter reviews the process of aging out of care from several different countries, noting the extent to which various countries offer relational support for youth aging out of care. The United Kingdom may be particularly well situated to employ the use of natural mentors in a structured context, due to their requirement that older youth identify and involve an advisor, or caring adult, with whom they have a prior relationship.
*Greeson et al. (2014)	• Conceptual article	• Natural mentoring relationships may function protectively and may help to improve the quality of life for vulnerable older youth exiting foster care (e.g., improved well-being outcomes). Such an approach is youth-led and may be more culturally competent, strengthening the relationship between foster youth and their communities. The article presents an example of a natural mentoring program being piloted, C.A.R.E.
*Jones (2014)	• Literature review	• Research supports a distinction between natural and formal mentors, and the author concludes that there is more empirical support for the benefits of natural mentoring among foster youth. Thus, the author recommends further research to determine the effectiveness of interventions aimed at improving social support among foster youth as well as more rigorous evaluation of formal mentoring programs to better understand how to best allocate resources for youth exiting care.
*Munson and Scott (2008)	• Conceptual article	• Education, employment, personal connections, and agency accountability remain central program initiatives with older youth nearing their exit from residential care. The authors suggest a more intentional integration of relationship-based components into existing programming as well as the development of new programs that would support relational development, such as natural mentoring, among older youth nearing foster care exit.
*Richmond (2015)	• Policy report	• This report found that many states are under-utilizing the funds available for extracurricular activities and suggests that some may not be aware of the possibility of such use. The author states that ensuring access to extracurricular activities is a <i>common-sense</i> way to ensure youth have opportunity to connect with supportive, trusted adults, such as natural mentors. The author suggests that Congress specifically allocate funding for foster youth to participate in extracurricular activities.
*Rhodes (2013)	• Online interview	• This interview was conducted via the Chronicle of Evidence Based Mentoring, an online resource for mentoring researchers and practitioners, and examines the Real Connections program designed to support natural mentoring relationships for youth in foster care. Using eco-maps, record mining, and Seneca searches, they help youth to identify potential natural mentors who receive trauma-informed training, background checks and clearances, and are connected with a staff member to help support them. Challenges include youth unable to identify adult supports, non-responsiveness of some adult supports and youth's fear of rejection.
*Spencer et al. (2010)	• Theoretical framework	• The authors review the promises and potential pitfalls of mentoring, suggesting that duration, consistency, and emotional connection are associated with stronger mentoring relationships. As such, they suggest that natural mentoring relationships may last longer than formally matched relationships. They also cite research that supports an association between natural mentoring and improved psychosocial outcomes among foster youth. They recommend rigorous evaluation of various mentoring programs for comparison and improvement.
*Thompson and Greeson (2015)	• Conceptual article	• The authors assert that permanency is both legal and relational in nature, though federal legislation has prioritized legal permanency. Recognizing the importance of relational permanency, they make the following recommendations: all youths exiting care should do so with the enduring and permanent support of at least one caring, committed adult (i.e., a natural mentor); child welfare jurisdictions should move away from independent living models and toward interdependent living programming; federal funding streams should prioritize building the evidence base to support effective programs and interventions aimed at improving both relational and formally recognized permanency among older youth exiting care.

*Hiles et al., 2013; *Greeson & Bowen, 2008; *Munson & McMillen, 2008; *Spencer et al., 2010; Williams, 2012), and several studies also focused on barriers and facilitators to natural mentoring relationships among foster youth (*Ahrens et al., 2011; *Collins et al., 2010; *Gilligan, 2007; *Greeson et al., 2015a,b; *Hass et al., 2014; *Richmond, 2015). Two publications report general confusion surrounding the term *natural mentor* (e.g., *Croce, 2013; *Jones, 2014). For example, *Croce (2013) notes that when interviewed, youth first denied having a natural mentor, yet later described the relationship in a manner consistent with the presence of a natural mentoring relationship. *Jones (2014) also suggests that not only has a distinction been identified in the research between natural and formal mentors, there is also more existing empirical support for the benefits of natural mentors than formal mentors among youth in foster care.

3.4. Implications and recommendations

Nineteen (50%) publications together recommend the following additional research: (1) an exploration of the way in which natural mentoring relationships are formed and maintained by foster youth, (2) the measurement of resilience as cultivated through supportive adult relationships, (3) the rigorous evaluation of formal mentoring programs to determine if such programming is effective in improving outcomes for vulnerable foster youth, (4) an investigation of the role of stable placements in developing and maintaining natural mentoring relationships, (5) an examination of how different types of placements impact youth's ability to cultivate natural mentoring relationships, and (6) ways to integrate relationship-based components into existing programming for older youth nearing their exit from foster care. Although

authors urge practitioners to consider ways to include natural mentoring in existing programs for aging out youth, one study warns against the attempt to force or fabricate these mentoring relationships. *Courtney (2009) believes the creation of interventions to foster the development of lasting connections between foster youth and nonkin adults should be done with caution, citing many youth's experiences with having had multiple failed relationships while in foster care. *Collins et al. (2007) also recommend natural mentoring programs be developed with caution, noting that creating meaningful relationships in natural environments is not a "proved science."

3.5. Limitations of natural mentoring studies

A primary limitation consistent with nearly all of the studies is the inability to generalize findings. Only two studies used nationally representative data, and many studies utilized small sample sizes. Another common limitation is the inability to infer causality, as 80% of the studies used point-in-time cross-sectional data. Additionally, all but two studies only investigated the youth, failing to examine outcomes and perspectives of other stakeholders (e.g., the natural mentors, caregivers of the youth). Finally, the varied definitions of natural mentoring and lack of a standardized definition are a limitation to these studies, as many of the publications utilized their own unique definition of natural mentoring, with five (13%) publications failing to provide a specific definition.

4. Discussion

This first systematic review of natural mentoring among youth in foster care provides some elucidation regarding the current status of the field, which is nascent but growing. For example, though the literature related to natural mentoring among foster youth spans for only a decade, half of the documents we identified are from the past three years, indicating that there is momentum for studying this phenomenon. Likewise, two-thirds of the documents located through our review are either conceptual/theoretical work or qualitative/exploratory studies, again reflective of a young body of research. However, since 2009, nearly each year a dissertation has been published specifically pertaining to natural mentoring among youth in foster care, further suggesting that emerging scholars are studying this growing field. Indeed, a number of quantitative studies have been conducted to test the theories and hypotheses that have emerged from the dozen or so qualitative studies of natural mentoring among youth in foster care. Though the majority of the quantitative studies are limited by their use of small samples and cross-sectional data, they continue to confirm a positive correlation between improved well-being outcomes and the presence of a natural mentor among adolescent youth in foster care, setting the stage for more rigorous research investigating causal relationships. Additionally, these studies have included both nationally representative samples as well as geographically specific samples from each major region of the United States (e.g., the northeast, southeast, mid-west, south, southwest, and West Coast). Drawing from this growing evidence base, researchers have begun to recognize natural mentoring as a promising approach for youth in foster care (*Ahrens et al., 2011; *Britner et al., 2013; *Greeson, 2013; *Jones, 2014). As such, the field must consider how to best guide and support practitioners in implementing practice that promotes natural mentoring for older foster youth and those at risk of aging out of care.

4.1. Research implications

The recommendations presented below are drawn from our systematic review and pertain to furthering the research agenda for natural mentoring among older youth in foster care. First, the field should adopt a standardized term and definition for natural mentoring, as varied terms make it difficult to search the literature and difficult to

compare studies. For example, our review identified at least ten different terms used to describe natural mentors, all of which minimally met our inclusion criteria but varied slightly. We suggest consistent use of the term *natural mentor*, defined as a *very important, nonparental adult that exists in a youth's social network, like a teacher, extended family member, service provider, community member, or coach, who "provides ongoing guidance, instruction, and encouragement aimed at developing the competence and character" of the young person* (*Greeson, 2013; Rhodes, 2002, p. 3). Relatedly, researchers should measure natural mentoring as a unique construct within studies investigating social support. During our initial literature search, twenty articles were excluded from our review because they did not measure natural mentors as an exclusive category. Most of these studies aggregated sources of social support (e.g., parental, peer), making it impossible to isolate the contribution of natural mentors. However, the support offered by natural mentors differs from that of parents or caregivers in that natural mentors are not usually tasked with enforcing daily rules and addressing misbehavior in a way that a parent or caregiver is. Likewise, natural mentors differ from peers in that they are older and more experienced and thus may be better positioned to lend counsel and provide resources that peers cannot (Spencer, 2007). Because of the distinct positioning of natural mentors within youth's social networks, it is important to measure their unique contribution.

Future investigation of natural mentoring among foster youth is warranted. As suggested by the studies in this review, more rigorous research methods are needed to examine the initiation and growth of natural mentoring relationships over time for youth in care. A major limitation of cross-sectional studies is their inability to infer causality and determine the direction of the explanatory relationship. In other words, do youth with higher psychosocial functioning tend to attract more natural mentors, or do natural mentors help improve psychosocial functioning among youth? Large-scale, longitudinal entry cohort studies would allow researchers to better understand how individual-level characteristics (e.g., demographics, maltreatment history) and contextual factors (e.g., living arrangement, placement stability) influence the development of natural mentoring relationships as well as better understand how natural mentoring relationships influence individual outcomes of interest (e.g., psychosocial functioning, academic performance, healthy behaviors). Also, as programs develop that support the initiation and growth of natural mentoring relationships among foster youth, evaluation using random assignment will be helpful in understanding the effectiveness of programmatically supporting natural mentoring. Finally, more studies ought to include the voice of stakeholders, particularly natural mentors, in their investigation of natural mentoring among foster youth.

4.2. Practice implications

Though more rigorous investigation is needed, the current evidence base contains theoretically supported studies that together corroborate a positive association between natural mentoring among youth in foster care and improved psychosocial, behavioral, and academic outcomes. A number of prominent mentoring researchers have recommended that child welfare systems actively support and facilitate natural mentoring relationships among foster youth, particularly those at risk of aging out of care. For example, in the most recent edition of the *Handbook of Youth Mentoring*, *Britner et al. (2013) recommend that child welfare systems "mobilize and incorporate natural mentors more systematically into services for youth in foster care (e.g., care coordination and transition planning), particularly for older youth for whom formal, programmatic relationships may be potentially less effective or difficult to establish" (p. 351). Likewise, *Greeson (2013) suggests "both incorporating natural mentoring into existing child welfare services as well as developing programs that provide opportunities for older foster youth to interact and naturally develop relationships with caring, nonparental adults" (p. 44). *Munson et al. (2010) state, "Organizations serving

youth transitioning from care should look carefully at ways of supporting existing natural mentoring relationships ... rather than trying to create new ones with adults who may not share some of the important similarities identified by these youth and that may or may not take hold” (p. 534). In a system that has traditionally prioritized the accrual of independent living skills over interdependent social connections, child welfare professionals may need guidance and support to promote and facilitate natural mentoring among foster youth. Although natural mentoring relationships exist organically within the community, they can be programmatically supported for youth in foster care (for example, see <https://vimeo.com/115837436>). Though such programming is not presently widespread, there are two mentoring programs known to the authors that programmatically support natural mentoring relationships for youth in foster care (e.g., *Greeson et al., 2014; *Rhodes, 2013), and such programming could be replicated and further investigated for its effectiveness. Also, existing services that include extensive search and outreach mechanisms among youth's social networks, such as Family Finding (Campbell, 2010), could be more systematically utilized to ensure that all youth who exit care do so with a natural mentor.

5. Conclusion

Though this is the first systematic review of natural mentoring among youth in foster care, there are several limitations that should be noted. First, this review only includes studies that are available in English. Second, because of the varied terms used to describe natural mentors, there may be additional natural mentoring studies that use terms not included in our search strings. Third, although we attempted to search the gray literature, there may be additional documents (e.g., conference presentations, local reports, file drawer studies) that we did not uncover. Fourth, because the field of natural mentoring among foster youth is nascent, this systematic review was limited by the overall small number of studies available, particularly the small number of quantitative outcome studies. However, this review is the first to systematically search through both peer-reviewed and non-academic sources to comprehensively identify work related to natural mentoring among youth in foster care. By synthesizing the documents from our review, we are able to gain a better understanding in regard to the present status of this growing field as well as outline a number of research and practice recommendations to continue its progress forward. Though further research pertaining to natural mentoring among foster youth is warranted, the findings and recommendations from studies included in this review support natural mentoring as a promising approach for youth transitioning to adulthood from foster care.

References¹

- *Ahrens, K. R., DuBois, D. L., Garrison, M., Spencer, R., Richardson, L. P., & Lozano, P. (2011). Qualitative exploration of relationships with important non-parental adults in the lives of youth in foster care. *Children and Youth Services Review, 33*, 1012–1023.
- *Ahrens, K. R., DuBois, D. L., Richardson, L. P., Fan, M. Y., & Lozano, P. (2008). Youth in foster care with adult mentors during adolescence have improved adult outcomes. *Pediatrics, 121*, e246–e252.
- *Avery, R. J. (2011). The potential contribution of mentor programs to relational permanency for youth aging out of foster care. *Child Welfare, 90*, 9.
- *Britner, P. A., Randall, K. G., & Ahrens, K. R. (2013). Youth in foster care. In D. L. DuBois, & M. J. Karcher (Eds.), *The handbook of youth mentoring* (pp. 341–354). Thousand Oaks, CA: Sage Publications, Inc.
- *Collins, M. E., Clay, C. M., & Ward, R. (2007). Leaving care in Massachusetts: Policy and supports to facilitate the transition to adulthood. Retrieved on September 30, 2015 from <http://www.bu.edu/ssw/files/pdf/20080603-ytfinalreport1.pdf>
- *Collins, M. E., Spencer, R., & Ward, R. (2010). Supporting youth in the transition from foster care: Formal and informal connections. *Child Welfare, 89*, 125.
- *Courtney, M. E. (2009). The difficult transition to adulthood for foster youth in the U.S.: Implications for the state as corporate parent. *Society for Research in Child Development, 23*, 3–19.
- *Croce, M. (2013). *Youth aging out of foster care: A study of youth sense of hope*. (Doctoral dissertation) Vermont: Union Institute and University.
- *Cushing, G., Samuels, G. M., & Kerman, B. (2014). Profiles of relational permanence at 22: Variability in parental supports and outcomes among young adults with foster care histories. *Children and Youth Services Review, 39*, 73–83.
- *Diehl, D. C., Howse, R. B., & Trivette, C. M. (2011). Youth in foster care: Developmental assets and attitudes towards adoption and mentoring. *Child & Family Social Work, 16*, 81–92.
- *Farruggia, S. P., Greenberger, E., Chen, C., & Heckhausen, J. (2006). Perceived social environment and adolescents' well-being and adjustment: Comparing a foster care sample with a matched sample. *Journal of Youth and Adolescence, 35*, 349–358.
- *Gilligan, R. (2007). Spare time activities for young people in care: What can they contribute to educational progress? *Adoption and Fostering, 31*, 92–99.
- *Greeson, J. K. P. (2013). Foster youth and the transition to adulthood: The theoretical and conceptual basis for natural mentoring. *Emerging Adulthood, 1*, 40–51.
- *Greeson, J. K., & Bowen, N. K. (2008). “She holds my hand”: The experiences of foster youth with their natural mentors. *Children and Youth Services Review, 30*, 1178–1188.
- *Greeson, J. K. P., & Thompson, A. E. (2015). Aging out of foster care in emerging adulthood. In J. J. Arnett (Ed.), *The Oxford handbook of emerging adulthood* (pp. 559–577). New York, NY: Oxford University Press.
- *Greeson, J. K., Thompson, A. E., Ali, S., & Wenger, R. S. (2015a). 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.
- *Greeson, J. K., Thompson, A. E., Evans-Chase, M., & Ali, S. (2015b). Child welfare professionals' attitudes and beliefs about child welfare-based natural mentoring for older youth in foster care. *Journal of Social Service Research, 41*, 93–112.
- *Greeson, J. K. P., Thompson, A. E., & Kinney, S. (2014). Natural mentoring of older foster care youths. *Social Work Today, 14*, 11–13.
- *Greeson, J. K. P., Usher, L., & Grinstein-Weiss, M. (2010). One adult who is crazy about you: Can natural mentoring relationships increase assets among young adults with and without foster care experience? *Children and Youth Services Review, 32*, 565–577.
- *Hass, M., Allen, Q., & Amoah, M. (2014). Turning points and resilience of academically successful foster youth. *Children and Youth Services Review, 44*, 387–392.
- *Hedenstrom, M. A. (2014). *Aging out of foster care: The experiences of former foster youth who successfully navigated this transition*. (Doctoral dissertation) Georgia: Georgia State University.
- *Hiles, D., Moss, D., Wright, J., & Dallos, R. (2013). Young people's experience of social support during the process of leaving care: A review of the literature. *Children and Youth Services Review, 35*, 2059–2071.
- *Jones, L. P. (2014). The role of social support in the transition from foster care to emerging adulthood. *Journal of Family Social Work, 17*, 81–96.
- *Jones, A. S., & LaLiberte, T. (2013). Measuring youth connections: A component of relational permanence for foster youth. *Children and Youth Services Review, 35*, 509–517.
- *Lenz-Rashid, S. T. (2009). Developing permanent, supportive connections while in care: Foster youth's perspectives. Retrieved on September 30, 2015 from <https://alamedasocialservices.org/opg/documents/PermanencyRptSept2009.pdf>
- *Mota, C. P., & Matos, P. M. (2015). Adolescents in institutional care: Significant adults, resilience and well-being. *Child & Youth Care Forum, 44*, (pp. 209–224).
- *Munson, M. R., & McMillen, J. C. (2008). Nonkin natural mentors in the lives of older youths in foster care. *The Journal of Behavioral Health Services & Research, 35*, 454–468.
- *Munson, M. R., & McMillen, J. C. (2009). Natural mentoring and psychosocial outcomes among older youth transitioning from foster care. *Children and Youth Services Review, 31*, 104–111.
- *Munson, M. R., & Scott, L. D., Jr. (2008). Older youth nearing their exit from congregate care: Current innovative programs. *Residential Treatment for Children & Youth, 24*, 77–91.
- *Munson, M. R., Smalling, S. E., Spencer, R., Scott, L. D., & Tracy, E. M. (2010). A steady presence in the midst of change: Non-kin natural mentors in the lives of older youth exiting foster care. *Children and Youth Services Review, 32*, 527–535.
- *Rhodes, J. (2013). Meet Kate Bronner: Foster Forward Program Coordinator. The Chronicle of Evidence-Based Mentoring. Retrieved on September 30, 2015 from <http://chronicle.umbmentoring.org/profiles-in-mentoring-program-coordinator-kate-bronner/>
- *Richmond, K. (2015). *Investing in foster youth's futures: Improving access to extracurricular activities and supportive relationships*. Congressional Coalition on Adoption Institute (Retrieved on September 30, 2015 from http://www.ccaainstitute.org/images/stories/pdf/2015_foster_youth_internship_program_report.pdf
- *Smith, A., Peled, M., Poon, C., Stewart, D., Saewyc, E., & McCreary Centre Society (2015i). *We all have a role: Building social capital among youth in care*. Vancouver, BC: McCreary Centre Society (Retrieved on September 30, 2015 from http://www.mcs.bc.ca/pdf/We_All_Have_A_Role.pdf).
- *Spencer, R., Collins, M. E., Ward, R., & Smashnaya, S. (2010). Mentoring for young people leaving foster care: Promise and potential pitfalls. *Social Work, 55*(3), 225–234.
- *Thompson, A. E., & Greeson, J. K. P. (2015). Legal and relational permanence in older foster care youths. *Social Work Today, 15*, 24–27.
- *van Rensburg, E. A. (2011). *Complexities related to aging out of foster care: Life skills, self-sufficiency and trust* (Doctoral dissertation). Texas: Texas Tech University.
- *Ward, R. L. (2009). “I took a break,” but now I am back: Foster youths' perspectives on leaving on returning. (Doctoral dissertation) Massachusetts: Boston University.
- *Williams, C. R. (2012). *Pathways to permanency: Perspectives from former foster care youth*. (Doctoral dissertation) Minnesota: Capella University.
- Campbell, K. (2010). *Basic family finding practice scaffold*. National Institute for Permanent Family Connectedness, Seneca Center (Resource Documents).
- Campbell, M., Egan, M., Lorenc, T., Bond, L., Popham, F., Fenton, C., & Benzeval, M. (2014). Considering methodological options for reviews of theory: Illustrated by a review of theories linking income and health. *Systematic Review, 3*(1), 1–11.

¹ References marked with an asterisk indicate studies included in the systematic review.

- Chronicle of Evidence-Based Mentoring (2015). Profiles in mentoring. Retrieved on September 30, 2015 from <http://chronicle.umbmentoring.org/category/mentoring-profiles/>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155.
- Corporation for National & Community Service (2015). Mentoring in America: A summary of new research. Retrieved on September 25, 2015 from http://www.nationalservice.gov/sites/default/files/documents/06_0503_mentoring_factsheet.pdf
- Courtney, M. E., & Dworsky, A. (2006). Early outcomes for young adults transitioning from out-of-home care in the USA. *Child & Family Social Work*, 11, 209–219.
- Dallos, R., & Comley-Ross, P. (2005). Young people's experience of mentoring: Building trust and attachments. *Clinical Child Psychology and Psychiatry*, 10(3), 369–383.
- DuBois, D. L., Portillo, N., Rhodes, J. E., Silverthorn, N., & Valentine, J. C. (2011). How effective are mentoring programs for youth? A systematic assessment of the evidence. *Psychological Science in the Public Interest*, 12, 57–91.
- Duncan, & Johnson (2015). My Brother's Keeper Task Force: One-year progress report to the President. Retrieved on December 7, 2015 from https://www.whitehouse.gov/sites/default/files/docs/mbk_one_year_report_2.pdf
- Dworsky, A., & Courtney, M. E. (2010). The risk of teenage pregnancy among transitioning foster youth: Implications for extending state care beyond age 18. *Children and Youth Services Review*, 32, 1351–1356.
- Dworsky, A., Napolitano, L., & Courtney, M. (2013). Homelessness during the transition from foster care to adulthood. *American Journal of Public Health*, 103(S2), S318–S323.
- Georgiou, S. N., Demetriou, A. P., & Stavrinides, P. (2008). Attachment style and mentoring relationships in adolescence. *Educational Psychology*, 28(6), 603–614.
- Graham, K. E., Schellinger, A. R., & Vaughn, L. M. (2015). Developing strategies for positive change: Transitioning foster youth to adulthood. *Children and Youth Services Review*, 54, 71–79.
- Grossman, J. B., & Rhodes, J. E. (2002). The test of time: Predictors and effects of duration in youth mentoring relationships. *American Journal of Community Psychology*, 30, 199–219.
- Harvard School of Public Health/MENTOR (2015). Who mentored you? Retrieved on September 30, 2015 from <http://www.hsph.harvard.edu/chc/wmy/>
- Hook, J. L., & Courtney, M. E. (2011). Employment outcomes of former foster youth as young adults: The importance of human, personal, and social capital. *Children and Youth Services Review*, 33, 1855–1865.
- McMillen, J. C., & Raghavan, R. (2009). Pediatric to adult mental health service use of young people leaving the foster care system. *Journal of Adolescent Health*, 44, 7–13.
- Muller-Ravett, S., & Jacobs, E. (2012). After foster care and juvenile justice: A preview of the Youth Villages Transitional Living evaluation. Policy brief. MDRC. Retrieved on September 30, 2015 from <http://files.eric.ed.gov/fulltext/ED531545.pdf>
- Munson, M. R., Brown, S., Spencer, R., Edguer, M., & Tracy, E. (2014). Supportive relationships among former system youth with mental health challenges. *Journal of Adolescent Research*. <http://dx.doi.org/10.1177/0743558414554803>.
- Para, G. R., DuBois, D. L., Neville, H. A., Pugh-Lilly, A. O., & Povinelli, N. (2002). Mentoring relationships for youth: Investigation of a process-oriented model. *Journal of Community Psychology*, 30, 367–388.
- Pecora, P. J., Kessler, R. C., O'Brien, K., White, C. R., Williams, J., Hiripi, E., English, D., White, J., ... Herrick, M. A. (2006). Educational and employment outcomes of adults formerly placed in foster care: Results from the Northwest Foster Care Alumni Study. *Children and Youth Services Review*, 28, 1459–1481.
- Rhodes, J. E. (2002). *Stand by me: The risks and rewards of mentoring today's youth*. Cambridge, MA: Harvard University Press.
- Rhodes, J. E., Haight, W. L., & Briggs, E. C. (1999). The influence of mentoring on the peer relationships of foster youth in relative and nonrelative care. *Journal of Research on Adolescence*, 9, 185–201.
- Rhodes, J. E., Spencer, R., Keller, T. E., Liang, B., & Noam, G. (2006). A model for the influence of mentoring relationships on youth development. *Journal of Community Psychology*, 34, 691–707.
- Spencer, R. (2007). "It's not what I expected" A qualitative study of youth mentoring relationship failures. *Journal of Adolescent Research*, 22, 331–354.
- Spencer, R., Basualdo-Delmonico, A., & Lewis, T. O. (2011). Working to make it work: The role of parents in the youth mentoring process. *Journal of Community Psychology*, 39, 51–59.
- Tolan, P. H., Henry, D. B., Schoeny, M. S., Lovegrove, P., & Nichols, E. (2014). Mentoring programs to affect delinquency and associated outcomes of youth at risk: A comprehensive meta-analytic review. *Journal of Experimental Criminology*, 10, 179–206.
- U.S. Department of Health and Human Services (2014). Administration for children and families, administration on children, youth and families, children's bureau. *The AFCARS report – preliminary FY 2013 estimates as of July 2014 (No. 21)* (Retrieved on September 30, 2015 from <http://www.acf.hhs.gov/programs/cb/resource/afcars-report-21>).
- University of Michigan (2015). *Grey literature: overview* Retrieved on September 30, 2015 from <http://guides.lib.umich.edu/greyliterature>
- Wood, S., & Mayo-Wilson, E. (2012). School-based mentoring for adolescents: A systematic review and meta-analysis. *Research on Social Work Practice*. <http://dx.doi.org/10.1177/1049731511430836>.
- Zimmerman, M. A., Stoddard, S. A., Eisman, A. B., Caldwell, C. H., Aiyer, S. M., & Miller, A. (2013). Adolescent resilience: Promotive factors that inform prevention. *Child Development Perspectives*, 0, 1–6.