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ABSTRACT

This study investigates the difference in the wellbeing of children in kinship care when compared to children in other care settings within Africa, examining factors that are associated with their wellbeing outcomes. A systematic review was conducted using the PRISMA guidelines. Fourteen databases and website were searched for empirical studies conducted in Africa between 2000 and 2017. Studies were included if they compared children in kinship care with other care settings. 23 studies were included and retained in the review. The degree of relatedness of carer to the child, socio-economic status of fostering households, gender and age were identified as factors contributing to the wellbeing of children in kinship care. The degree of relatedness to the caregiver and socio-economic status of the fostering household were the strongest determinants of the wellbeing of children in kinship care. This review finds that parental care remains the best care setting and should be highly encouraged within African society. However, outside of parental care, kinship care is the most sustainable and affordable form of care for children in Africa. The evidence suggests that systems that support the placement of children with close kin members and ensure economic strengthening programs for poor families with children should be supported and put in place by the African governments.

Keywords: child, kinship care, fosterage, alternative care, child wellbeing, Africa

1. Introduction

The Convention on the Rights of the Child (Article 20) articulates that children are entitled to suitable alternatives when they are out of parental care (Unicef, 1989). Biemba et al. defined "alternative care as all types of residential care given to a child outside of the parental home" [(p.1)]. Alternative care environments for children include family-centered care (kinship/extended family care, adoption, child headed households, foster families), institutionalised care (group homes, orphanages) and community-based care (Biemba, Beard, Brooks, Bresnahan, & Flynn, 2010). However, the Convention on the Rights of the Child (CRC) preamble, the 1993 Hague adoption convention preamble, and the African Charter on the Rights and Welfare of the Child (Article 25) affirm that the family environment is essential for the protection and wellbeing of children who are out of parental care. Moreover, there are often long-term implications which follow children into adulthood due to a lack of stability and security that a family environment provides (Parkinson, 2003).

Kinship care is a form of alternative care within the family environment. Studies have shown that kinship care is an alternative care arrangement that is available on a significant scale within Africa (Biemba et al., 2010; Bledsoe & Gage, 1987; Roby, 2011). A study based in Uganda revealed that one third of Uganda households had a child living in kin care (Deininger, Garcia, & Subbarao, 2003). Similarly, Hampshire et al. (2015) reported that nearly two thirds of children in kinship care in Ghana have both parents alive. In addition, Tamasane and Head (2010) reported that 49% of non-orphans live with extended family members in South Africa. Likewise, with the use of the Demographic Health Survey (DHS) data in 10 Africa countries, Case, Paxson, and Ableidinger (2004) found that between 10% and 30%+ of non-orphans live in kinship care.

In Africa, kinship care is a long-standing traditional practice based on the principle of kin and community responsibility for child rearing (Lachaud, LeGrand, & Kobiané, 2016). It is part of the multidimensional social support strategy for African families (Bachan, 2014; Dahl, 2009; Eloundou-Enyegue & Shapiro, 2004). Kinship care within Africa is unlike the situation in developed countries (like United Kingdom (UK), Australia and the United States of America (USA)), where placing children in the care of relatives has been regulated and utilised in child welfare policies and practice for over two decades (Ince, 2010). Kinship care in Africa is usually

arranged informally between relatives, unregulated by states or authorities (Assim, 2013; Roby, 2011). It is the placing of a child within the child's extended family (grandparents, older siblings, aunts, uncles, more remote kin), or sometimes nonrelatives such as close friends of the family (Broad, 2007; Zimmerman, 2003). Children may be fostered (live in kinship care) for a duration of a few months up to several years (Isiugo-Abanihe, 1985). Reasons for child fostering in Africa could be purposive (also called voluntary fostering); in times of crisis in parental households, it is referred to as crisis or involuntary fostering (Bledsoe, 1994; Goody, 1982; Madhavan, 2004; Mathambo & Gibbs, 2009; Roby , Shaw, & George, 2014). Reasons for purposive fostering include the demand for domestic labour, emotional bonds and companionship, social or political prestige, educational or job prospects of the child, a desire to cement social ties and changes in conjugal status (Akresh, 2009; Alber, 2004; Notermans, 1999; Zimmerman, 2003). During crisis periods, children may be fostered due to the death of a parent, economic crisis, family breakdown, separation, conflict, disaster, and migration (Akresh, 2009; Beck, De Vreyer, Lambert, Marazyan, & Safir, 2015; Isiugo-Abanihe, 1985; Serra, 2009).

Furthermore, in the context of over 13 million children orphaned by AIDS in the sub-Saharan region (UNAIDS, 2010) – noting that 69% of all people living with HIV lives in sub-Saharan Africa (UNAIDS, 2012) - and conflict in certain regions of Africa, kinship care becomes the likely care environment for a great number of children (Eloundou-Enyegue & Shapiro, 2004; Zimmerman, 2003). Orphans are usually placed in kinship care (Subbarao, Mattimore, & Plangemann, 2001). The care of orphans and vulnerable children is considered to be an obligation for relatives (Assim, 2013; Bennett, 1999; Roby, 2011). Data from DHS survey for Burkina Faso, Nigeria, Cameroon, Ethiopia, Ghana, Uganda, Kenya, Malawi and Mozambique indicates that 85 percent of orphans lived with relatives (USAID&UNICEF, 2008) while 50% and 33% of orphans live with their grandmothers in Tanzania and Zambia respectively (Dunn & Parry-Williams, 2008). Monasch and Boerma (2004) also reported that one in every six households with children cared for orphans within 40 Africa countries.

However, the drastic increase in the number of children out of parental care, economic hardship in African countries, and the informal nature of kinship care in Africa raises questions about the wellbeing of children in kinship care. It has been suggested that the extended family system is been overstretched and may not be able to adequately provide for the need of children out of parental

care (Eloundou-Enyegue & Shapiro, 2004; Monasch & Boerma, 2004; Nyambedha, Wandibba, & Aagaard-Hansen, 2003; Roby, 2011). According to Schor (1995), "Children's health and well-being is directly related to their families' ability to provide their essential physical, emotional, and social needs"[(p. 413)]. The "Hamilton's Rule" attributed to evolutionary biology theory suggest that altruistic behaviour towards another individual illustrates the closeness of their genetic relatedness (Hamilton, 1964). This implies that since foster children do not share as many genes with their caregivers as children living with their biological families, households would allocate fewer scarce family resources to foster children than to biological children. When resources are limited, a caregiver may allocate resources in favour of biological children or more closely related children in their care (Bishai et al., 2003; Case, Lin, & McLanahan, 2000; Hamilton, 1964; Oleke, Blystad, Moland, Rekdal, & Heggenhougen, 2006; Oleke, Blystad, & Rekdal, 2005).

Building on the UN convention on the rights of the child (CRC), existing human development theories and empirical research work, literature suggests that children's wellbeing is multidimensional and ecological (Ben-Arieh, 2010; Lippman, Moore, & McIntosh, 2011; Raghavan & Alexandrova, 2015). Lippman et al. (2011) provides a conceptual framework that identifies child well-being, relationships, and contexts as multi-dimensional. It categorises child well-being (individual) into four domains. The framework identifies constructs of positive wellbeing within each of the domains. The domains are (a) physical health, development and safety (constructs include: overall health, healthy habits, etc); (b) cognitive development and education (examples of construct are educational attainment, academic self-concept, etc); (c) psychological/emotional development (examples of construct are emotional wellbeing, self-management, etc); and (d) social development and behaviour, example of construct are prosocial values, social intelligence etc. Consequently, using the Lippman conceptual framework of child wellbeing domains, this study conducts a systematic review on literature regarding the individual wellbeing of children in kinship care for each domain within the framework.

The objectives of this review are to systematically examine differences in the wellbeing of children in kinship care compared to other care settings in Africa and investigate what factors contribute to the wellbeing of children kinship care within Africa.

2. Methodology

A systematic review was conducted using the PRISMA guidelines (Moher, Liberati, Tetzlaff, Altman, & Group, 2009). A review protocol for this study was developed and registered in Prospective Register of Systematic Reviews (PROSPERO) (Registration number: CRD42018085997).

Ten databases and four websites were searched: Web of science core collection, Scopus, Sociological abstract, Eric, Medline**,** Biosis citation index, Better care Network (BCN), ProQuest education database, ProQuest psychology database, ProQuest Middle east and Africa database, African journals online (AJOL), SciELO citation Index**,** CRIN (child right international network) database, and Save the Children (SCI) library. Children and youth services review and the Research Gate network were also hand searched. The snowball method (references from other identified literatures) was also used to identify other relevant studies that were not found in the databases and websites. The search was conducted from August 2017 till November 2017. Searches were restricted to studies conducted in Africa, published in English language, between 2000 to 2017. This time selection is to allow for an assessment of recent or current situations of kinship care in Africa. However, studies with unidentified geographical locations on the database were also included.

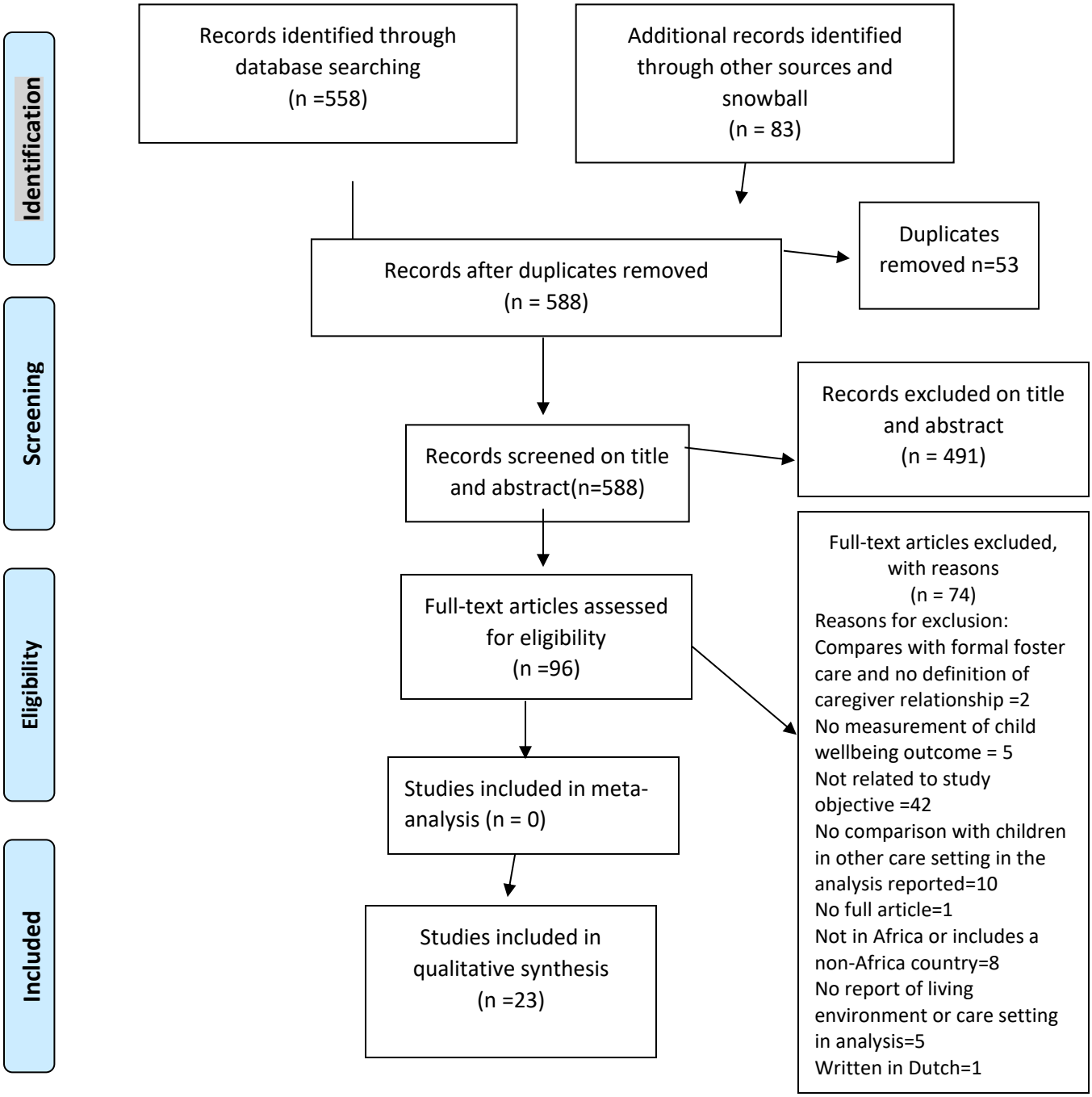
To perform the search, the following search terms were used: (child*) and (kinship care* or "informal care* or alternative care* or foster care* or extended family care* or “guardianship care*or orphan care* or child fosterage* or care for orphans*or domestic adoption* or “relative care* or traditional safety net*). See appendix D for examples of full search strings on databases.

2.1. Inclusion criteria:

Studies were included if they measured or studied any child well-being outcome in relationship to kinship care or informal foster care within any African country. Study participants could be children and/or caregivers. Studies were only included if they included (comparison of) children in different care/living environment settings in the study. Studies that focused on orphan care or wellbeing were included if they reported on the living environment or care settings in the analysis of the groups compared and met every other inclusion criterion.

One author (AE) searched electronic databases for potentially eligible studies while two authors (EW and DM) independently cross checked the results from the database. Following this, titles and abstracts were screened for 584 studies by (AE) for studies that described an empirical study of kinship care within Africa. Subsequently, 97 articles were eligible for screening of the full text. Full texts of selected studies were reviewed using the inclusion criteria by two of the authors(AE and EW). Reasons for excluding potentially eligible studies were listed and discussed with the other two review authors (EW and DM), and a final list was subsequently developed. One article was not, however, accessible (as efforts to contact the author through research gate and emails were unsuccessful) (Sala, 2009). Consequently, 96 full text articles were screened for the inclusion criteria. Characteristics of each study (author, sample size, population sample, country of study, comparison groups, aim of the study, result of the study, data source, study design and analytical method) were extracted into a piloted and revised extraction table developed in Microsoft Excel sheet See Table 1 for details.

2.2. PRISMA flow chart (Moher et al., 2009)



2.3. Risk of Bias Assessment

Three review authors (AE, EW and DM) assessed the risk of bias of the selected studies using the JBI critical appraisal checklist for qualitative research (Lockwood, Munn, & Porritt, 2015), JBI critical appraisal checklist for analytical cross sectional and JBI critical appraisal checklist for cohort studies respectively (Moola et al., 2017) .See Appendix A to C for details. Both qualitative and quantitative components of mixed methods studies were assessed independently with qualitative and quantitative assessment tools. Each assessment question was awarded zero or one point. One was scored to ‘’yes” and “Not applicable”, while “No” and “unclear” were scored as zero. This review used a minimum score of 5 point as an indication for low risk of bias (Kivelä, Elo, Kyngäs, & Kääriäinen, 2014). For mixed method studies, the quantitative or the qualitative part most have scored at least 5 points for it to be included in this review. In general, all studies were of good methodological quality for their design. See table 2 ,3,4 for details.

3. Results

3.1. Description of included studies.

This review includes twenty-three articles of empirical studies retained based on the inclusion criteria. The studies include twenty-one peer reviewed studies and two discussion/working paper (Akresh, 2004; Eloundou-Enyegue & Shapiro, 2004). The methodology of selected studies are as follows: two qualitative studies (Verhoef & Morelli, 2007; Zimmerman, 2005), four mixed methodology surveys (Hampshire et al., 2015; Madhavan & Townsend, 2007; Prall & Scelza, 2017; Wolff & Fesseha, 2005), and seventeen quantitative studies. Twenty of the studies were cross sectional studies while three studies were panel studies (Akresh, 2004; Deininger et al., 2003; Parikh et al., 2007).

All the included studies were conducted in seventeen sub-Saharan Africa countries. Although the goal of the review was to examine the situation across the whole African continent, articles were only found for studies conducted in Sub Saharan Africa. These include: Uganda (Case et al., 2004; Deininger et al., 2003; Roby, Erickson, & Nagaishi, 2016; Roby et al., 2014; Yamano, Shimamura, & Sserunkuuma, 2006),Malawi (Case et al., 2004; Hampshire et al., 2015; Roby et al., 2016; Zimmerman, 2005), Zimbabwe (Case et al., 2004; Roby et al., 2016), Zambia (Case et

al., 2004), Niger (Case et al., 2004; Roby et al., 2016), South Africa (Madhavan & Townsend, 2007; Parikh et al., 2007; Tamasane & Head, 2010; Zimmerman, 2003), Ghana (Case et al., 2004; Gage, 2005; Hampshire et al., 2015), Namibia (Brown, 2009; Case et al., 2004; Prall & Scelza, 2017; Scelza & Silk, 2014), Burkina Faso (Akresh, 2004; Lachaud et al., 2016), Senegal(Beck et al., 2015), Eritrea (Wolff & Fesseha, 2005), Rwanda (Caserta, Pirttila-Backman, & Punamaki, 2017), Nigeria (Ushie, Osamor, Obieje, & Udoh, 2016), Kenya (Case et al., 2004), Tanzania (Case et al., 2004), Mozambique (Case et al., 2004; Roby et al., 2016), and Cameroun (Eloundou-Enyegue & Shapiro, 2004; Verhoef & Morelli, 2007). Six studies reported on more than one country.

All studies included children as the study participants. Two studies did not report the sample size (Case et al., 2004; Deininger et al., 2003). Case et al. (2004) utilised Demographic Health Survey (DHS) data to conduct analysis for 10 Africa countries while Deininger et al. (2003) utilised Uganda national household survey (UNHS) data of (1300) household for its analysis. The remaining quantitative studies had sample sizes ranging from 117 children to 124,592 children. The qualitative studies (Verhoef & Morelli, 2007; Zimmerman, 2005) had sample sizes of 40 and 50 children respectively .All studies reported on the children age participants, which ranged from birth to 18 years while three studies (Eloundou-Enyegue & Shapiro, 2004; Madhavan & Townsend, 2007; Prall & Scelza, 2017) used age ranging to 24,22 and 20 years respectively.

Based on reported prevalence of kinship care within Africa in comparison to all forms of alternative care environments for children in literature, the review inclusion criteria was broadened to allow for an adequate number of studies that compared children in kin care with other alternative care environments. However, we found no studies comparing kinship care with formal foster care (probably because formal foster care is unpopular or scarce in most African countries),only four (4/23) studies (Caserta et al., 2017; Ushie et al., 2016; Wolff & Fesseha, 2005; Zimmerman, 2005) included residential care in their comparison groups, and one study (Caserta et al., 2017) included child-headed and street children in its comparison group. Two (2/4) studies (Ushie et al., 2016; Zimmerman, 2005) compared kinship care with residential care only, while the remaining two (2/4) studies (Caserta et al., 2017; Wolff & Fesseha, 2005) compared four different types of care environment (kinship and parental care inclusive). The remaining nineteen (19/23) studies compared kinship care with children in parental care only. Nonetheless, the nineteen studies

grouped children in parental care for comparison as follows: (1) host siblings (i.e. biological children of kinship carers living in the same household with children in kinship care), (2) Biological siblings (i.e. siblings of children in kinship care who live with biological parent) (3) non-fostered children (i.e. children living with parent). Altogether twenty-one studies compared or included children living in parental care in their comparison group. Eight studies (Case et al., 2004; Caserta et al., 2017; Deininger et al., 2003; Parikh et al., 2007; Tamasane & Head, 2010; Wolff & Fesseha, 2005; Yamano et al., 2006; Zimmerman, 2005) focused on orphan population.

The studies included in this review define an orphan as any child who has lost a mother, father, or both. For this study, the term "living in kinship care" and "fostered" have been used interchangeably. The words "non-fostered children", "children in parental care" and "children in biological care" have also been used to mean the same thing.

3.2. How different is the wellbeing of children in kinship care to other care settings in Africa?

The wellbeing of children in kinship care was compared to the wellbeing of children in different care settings. Findings have been summarised thematically using the Lippman et al. (2011) child wellbeing domains Framework. The domains are as follows: cognitive development and education, physical health, development, and safety, social development/ behaviour and psychological/ emotional development. There were no studies on cognitive development, so studies for the cognitive development and education domain reported on education indicators only.

3.2.1. Education

The of majority of the studies (17/23) in this review examined the relationship between education indicators and kinship care. Most (12/17) of the studies reported on school enrolment and attendance. Other educational indicators reported includes: education attainment, access to education services, school progress, annual expenditure on schooling, possession of educational materials, school performance, and post primary school attendance. All but one (16/17) of the seventeen studies(Zimmerman, 2005) compared children in kinship care to non-fostered children. Only Zimmerman (2005) compared orphan children in kinship care to orphan children in orphanage homes.

Seven (7/17) (Case et al., 2004; Gage, 2005; Hampshire et al., 2015; Lachaud et al., 2016; Roby et al., 2014; Yamano et al., 2006; Zimmerman, 2005) studies concluded that children in kinship care were disadvantaged in terms of educational outcomes when compared to other children. Lachaud et al. (2016) measured the likelihood of attending post primary school and found that 89% of never fostered children attended post primary school while only 76% of children that were fostered attained post primary education. Roby et al. (2014) found that children in kinship care were 4.17 times more likely not to attend school when compared to children in parental care. Likewise, Yamano et al. (2006) reported that non-orphaned fostered male adolescent were 50% less likely to be in school than children in parental care. Gage (2005) also reported that fostering increases the likelihood of girls not to attend school. Zimmerman (2005) qualitative study compared orphans in kinship care with orphans in orphanage homes and reported that orphans in kinship care had fewer educational materials and lower school attendance compared to orphans in orphanage care.

In contrast, eight (8/17) (Akresh, 2004; Beck et al., 2015; Deininger et al., 2003; Eloundou-Enyegue & Shapiro, 2004; Parikh et al., 2007; Tamasane & Head, 2010; Verhoef & Morelli, 2007; Zimmerman, 2003) studies reported an increase or no significant difference in educational indicators for fostered children and non-fostered children. Tamasane and Head (2010) reported a slightly higher percentage of school attendance for orphans living with grandparents (98%), or non-relatives (97%) when compared to orphans living with their remaining parents (95%). Zimmerman (2003), Eloundou-Enyegue and Shapiro (2004) and Akresh (2004) reported that kinship care increases the opportunity for children to be enrolled in school. Zimmerman (2003) and Akresh (2004) indicated that the fostered children are from parental households with lower enrolment rates while Eloundou-Enyegue and Shapiro (2004) established that kinship care reduces the risk of school dropout for fostered children when compared to non-fostered children with similar characteristics ($OR=0.66; p<.01$). It also appeared that children in kinship care achieve better or similar educational outcomes when compared to their biological siblings or host siblings. Four (Akresh, 2004; Beck et al., 2015; Parikh et al., 2007; Zimmerman, 2003) (4/8) of the studies that reported an increase or no significant difference for educational indicators compared children in kinship care to their biological siblings or host siblings.

The remaining two studies (Brown, 2009; Roby et al., 2016) (2/17) reported mixed findings for different fostered groups. They concluded that children who lived with close relatives have similar educational outcome with non-fostered children while children living with non-relatives or distant relatives were reported to be disadvantaged for educational outcomes. Though the findings cited above are mixed, it provides some evidence that fostering can be positive for some children on educational outcomes.

3.2.2. Physical health, development, and safety

Eight (Beck et al., 2015; Gage, 2005; Roby et al., 2014; Tamasane & Head, 2010; Ushie et al., 2016; Verhoef & Morelli, 2007; Zimmerman, 2005; Zimmerman, 2003) studies reported on safety indicators which includes: exposure to child abuse, nurturing behaviour of caregiver, involvement in domestic labour and economic work, and possession of birth certificate. Six (6/8) studies compared children in kinship care with children in parental care while two studies (Ushie et al., 2016; Zimmerman, 2005) compared to children in orphanage homes.

Most (6/8) (Beck et al., 2015; Gage, 2005; Tamasane & Head, 2010; Ushie et al., 2016; Verhoef & Morelli, 2007; Zimmerman, 2003) of the studies reported a non-significant difference for children in kinship care and children in other care setting while two (Roby et al., 2014; Zimmerman, 2005) studies had different conclusions respectively. Zimmerman (2005) used a qualitative design methodology to conclude that children in kinship care were involved in more domestic work and had less nurturing behaviour from caregiver when compared to children in orphanage homes while Roby et al. (2014) had a mixed report for different fostered groups. They reported that children living with other relatives (aunts, nephews etc) involved in more labour than children in parental care but there was no difference in labour equity for children living with siblings or grandparents when compared to children in parental care. Ushie et al. (2016) and Zimmerman (2005) compared children in kinship care to children in orphanage homes and both had contrary reports. Ushie et al. (2016) with the aid of a quantitative methodology found no statistically significant difference ($T=0.0078, p=0.938$) for exposure to child abuse for both groups whereas Zimmerman (2005) reported otherwise (as mentioned above). Hence, the findings cited above may reflect that children in kinship care are not disadvantaged in terms of safety outcomes when compared to other children.

However, studies from this review provide some evidence that children in kinship care may likely have poorer health outcomes when compared to children in other care settings. Eight studies examined the relationship between kinship care and health outcomes. The health indicators measured by studies in this review included nutrition status (measured by weight for age, body mass index (BMI), height for age, weight for height), food quantity, food quality, food equity, number of meals per day, access to health services and health care when ill. Five (Deininger et al., 2003; Madhavan & Townsend, 2007; Prall & Scelza, 2017; Scelza & Silk, 2014; Zimmerman, 2005) (5/8) studies reported negative association with kinship care, two(Parikh et al., 2007; Tamasane & Head, 2010) (2/8) of the studies found no significant difference between nutrition of children in kinship care and children in parental care while one study (Roby et al., 2014) found no association between food equity and care environment. In addition, Prall and Scelza (2017) reported that adults who were fostered in childhood had lower height compared to non-fostered counterparts.

3.2.3. Psychological/ emotional development

Few studies (3 studies) (Caserta et al., 2017; Wolff & Fesseha, 2005; Zimmerman, 2005) compared psychological wellbeing of children in kinship care in this review to children in other care settings. All three studies were focused on orphans and included children in orphanage homes among their comparison groups while only one study (Wolff & Fesseha, 2005) compared them to children in parental care. In Zimmerman (2005), children in orphanage homes were reported to have a broader concept of the future than children in foster homes. They also had more free time to afford them autonomy than children in kinship care. Caserta et al. (2017) compared orphans in kinship care with orphans in child headed households, children in orphanages, and orphans living on the street. The study did not report on the emotional wellbeing of children in kinship care but did found that children in orphanage homes had the highest emotional wellbeing while children who lived on the street had lower level of emotional wellbeing. Children from child headed households and children on the street had highest level of risk-taking behaviour. However, in Wolff and Fesseha (2005) orphans who lived with extended family members had greater adaptive skills than institutional orphans , higher self-esteem and interpersonal relations than children in parental care, but reported lower personal adjustment and equal signs of emotional distress as orphans in institutionalised homes, whereas orphans in the small group home (small group homes in the selected study was

defined to accommodate a maximum of 12 children of different ages and two experience housemothers) had fewer signs and symptoms of emotional distress than all other comparison groups.

3.2 4. Social development/ behaviour

Four studies (Ushie et al., 2016; Verhoef & Morelli, 2007; Wolff & Fesseha, 2005; Zimmerman, 2005) included outcome indicators related to social development and behaviour, which included the caregiver-child relationship, interaction with other children, and attendance of social activities. Two studies (Ushie et al., 2016; Zimmerman, 2005)compared children in kinship care with children in orphanage homes and both concluded that children in orphanages had better social relationships or behaviour. Ushie et al. (2016) reported a higher positive caregiver-child relationship median score (15.00) for children in residential care as compared to children in kinship care, with a median score of 12. Likewise, Zimmerman (2005) reported that orphans in orphanage homes were more affectionate toward other orphans, and were more comfortable and confident in conversation than children in kinship care. In contrast, Wolff and Fesseha (2005) found that children in kinship care attended community activities regularly while 70 % of children in institutional care did not participate in community activities.

Only one study (Verhoef & Morelli, 2007) compared children in kinship care based on their fostering circumstance to non-fostered children. The study reported that children fostered for social purposes spent more time interacting with other children than children fostered due to crisis.

3.3. What factors affect the wellbeing of children in kinship care?

There are five factors examined by most studies in this review in relation to the wellbeing outcomes of children in kinship care. The factors are (1) degree of relatedness to the foster parent, (2) socioeconomic status of the fostering households, (3) gender of the fostered child, (4) age of the fostered child and (5) fostering circumstances. Other factors examined within the studies included family size and type (Lachaud et al., 2016), community type and opportunities (Akresh, 2004; Gage, 2005; Lachaud et al., 2016; Roby et al., 2016), parental education status (Gage, 2005), ratio of biological children to foster children within the fostering household (Roby et al., 2014), length of stay in fostering household (Caserta et al., 2017; Ushie et al., 2016), age at placement into

residential home or foster household (Lachaud et al., 2016; Wolff & Fesseha, 2005),and governmental policy (Deininger et al., 2003).

3.3.1. Degree of Relatedness

Studies in this review reported a positive relationship with the degree of relatedness for fostered child well-being. Twelve studies (Beck et al., 2015; Brown, 2009; Case et al., 2004; Hampshire et al., 2015; Lachaud et al., 2016; Madhavan & Townsend, 2007; Parikh et al., 2007; Roby et al., 2016; Roby et al., 2014; Scelza & Silk, 2014; Tamasane & Head, 2010; Zimmerman, 2003) examined the relationship between wellbeing outcomes for children in kinship care and the children's relationship to the foster carer. Eleven (11/12) of the included studies reported that children fostered by close relatives (for example grandparents, siblings) had better wellbeing outcomes than children living with distant relatives or non-kin members. Only one study (Scelza & Silk, 2014) reported no association between degree of relatedness and nutritional status). Brown (2009) compared groups of children living with (i) other relatives, (ii) non-relatives, (iii) sibling, (iv) grandparent, (v) adopted/fostered and (vi) parents and reported that children living with the non-related carer had significantly less education than any of the groups compared. In Roby et al. (2014) children living with grandparents or older siblings did not perceive a difference in their workload equity with other children within their household whereas children living with other relatives do more work, about 2.8 times ($p<0.01$) than other children in the household. Similarly, Zimmerman (2003) reported that children fostered by remote or non-kin are 5% less likely to attend school. In addition, studies (Parikh et al., 2007; Tamasane & Head, 2010) that used samples of children living with close relatives for their analysis reported no significant difference between children in kin and children in parental care for outcomes measured. Although Lachaud et al. (2016) reported that children living with grandparent had better current school enrolment than children living with other relatives, they found that children living with grandparents were less likely to attend post primary education than children living with other relatives. Overall, there is evidence that the degree of relatedness of children to the fostering household is important to the wellbeing of fostered children for all the child wellbeing domains. Therefore, the less distant the relationship of the caregiver the better the outcomes for the fostered child.

3.3.2. Socioeconomic circumstances of fostering household

Studies in this review identified fostering household financial or socioeconomic situation as a correlate of wellbeing of fostered children. Six studies examined socioeconomic status of households as a predictor of child wellbeing. Five of the studies reported that the socioeconomic status of the fostering household is positively related to the child's well-being. Roby et al. (2014) reported that for every 1% increase in household income, children in kinship care were 1.39 times more likely to perceive food distribution as equal within their host households. Likewise, Yamano et al. (2006) found that an increase in the household value asset holdings from 25% to 75% increased the likelihood of secondary school attendance by 17% and 12% for boys and girls respectively. Similarly, with the use of eight years DHS data of five African countries (Zimbabwe, Malawi, Niger, Uganda, and Mozambique) household wealth was found to be strongest predictor of school attendance (Roby et al., 2016). In comparison with children in orphanage homes, Zimmerman (2005) reported that the orphanage homes had abundant foreign financial support which contributed to the better wellbeing report for children in orphanage homes. It was only Case et al. (2004) that found no association between poor school enrolment for orphans and fostering household wealth. These findings suggest that the socioeconomic status of the fostering family is related to the wellbeing of fostered children.

3.3.3. Gender and Age

Thirteen (13/23) studies examined the relationship between gender, age and wellbeing outcome for children in foster care. Two (Madhavan & Townsend, 2007; Roby et al., 2014) (2/13) of these studies reported for age only, four (4/13) studies reported for age and gender together while seven (7/13) studies (Beck et al., 2015; Brown, 2009; Eloundou-Enyegue & Shapiro, 2004; Prall & Scelza, 2017; Roby et al., 2016; Scelza & Silk, 2014; Zimmerman, 2003) examined gender only.

All four (4/13) (Akresh, 2004; Gage, 2005; Lachaud et al., 2016; Yamano et al., 2006) studies that reported on age and gender together found that older girls in fostering are at a greater disadvantage than fostered male counterparts, younger fostered female children or non-fostered children. For example, Lachaud et al. (2016) found that girls fostered after the age of 10 years at the beginning of the fostering period were disadvantaged for school enrolment and post primary school attendance than non-fostered and fostered counterparts. Gage (2005) found that fostered females

between the age of 12-17 years were less likely to be enrolled in school and were more likely to be engaged in full time labour work than their fostered male counterparts and non-fostered female counterparts. This gender difference was absent for fostered children between the age group of 7 -11 years.

Studies (7/13) that examined for relationship between gender and wellbeing outcomes reported differs and mixed findings. Two studies (Roby et al., 2016; Zimmerman, 2003) reported variations for locations. Zimmerman (2003) found that it was only girls fostered in rural households that did more labour work than non-fostered children and fostered male counterparts while Roby et al. (2016) reported gender variations for school attendance in different countries. One study (Eloundou-Enyegue & Shapiro, 2004) reported no significant difference in gender for school enrollment whereas Beck et al. (2015) reported that foster girls not born in the household are more loaded with domestic chores than other fostered children. In contrast, the remaining three (3/7) studies (Brown, 2009; Prall & Scelza, 2017; Scelza & Silk, 2014) reported that boys were disadvantaged on wellbeing outcomes.

The two (2/13) (Madhavan & Townsend, 2007; Roby et al., 2014) studies that reported for relationship between age and wellbeing outcomes were contrasting. Roby et al. (2014) found that for every year increase in age the probability of not attending school decreased by 0.74 ($P<0.01$) for fostered children whereas Madhavan and Townsend (2007) reported that older children are less likely to be nutritionally disadvantaged. The contrasting finding could be due to the different outcome examined by the studies. Though the findings on age and gender are mixed, there are some evidences that girls and older children may be more disadvantaged than other children.

3.3.4. Fostering Reason/Circumstances

Fostering reasons or circumstance is identified as a factor affecting wellbeing of children in foster care, although there is little strong evidence as regards this: only four studies (Akresh, 2004; Hampshire et al., 2015; Scelza & Silk, 2014; Verhoef & Morelli, 2007) reported fostering circumstances as a factor for children's wellbeing. Children fostered out due to crisis are often expected to earn their living(Verhoef & Morelli, 2007).Children that are fostered out on demand were reported to engage more in domestic work or labour work (Hampshire et al., 2015). Scelza and Silk (2014) found that children fostered out due to parental death and for domestic help purposes were more likely to be stunted than their counterparts. However, children were reported

to be less discriminated and better treated when fostered out to strengthen social ties and relationships (Verhoef & Morelli, 2007).

4. Discussion

This review provides an overview of the wellbeing of children in kinship care when compared with children in parental care, and other forms of alternative care within Africa. The review also endeavoured to investigate the determinants of the wellbeing of the Africa child in Kinship care.

Similar to other research findings on kinship care in developed countries (Cuddeback, 2004; O'Higgins, Sebba, & Gardner, 2017) evidence on the wellbeing of children in kinship care within Africa are mixed and should be interpreted with caution, given that included studies have used different samples, methodology, context of studies, and analysis are based on self-report data.

Nevertheless, kinship care may be beneficial for some children out of parental care. We find evidence from this review that children in kin care do not fare worse when compared to their host siblings or non-fostered biological siblings. Also, studies in this review reported that children in kinship care have the same safety indicators as children in parental care. Moreover, some studies indicated that fostered children are from lesser privileged homes and that fostering provides them the opportunity to improve their wellbeing (Akresh, 2004; Eloundou-Enyegue & Shapiro, 2004; Zimmerman, 2003) while some previous studies have argued that fostering households were poorer homes especially in crisis fostering (Bicego, Rutstein, & Johnson, 2003; Monasch & Boerma, 2004). Furthermore, the studies that compared kinship care to residential care were few, they used differing methodologies, assessment criteria and reported different findings. We could not reach a conclusion in respect of comparing them to kinship care. In addition, the high cost of running institutional homes established in the literature (Bhargava & Bigombe, 2003; Wolff & Fesseha, 2005; Zimmerman, 2005) makes it less sustainable for the African community. Kinship care remains the viable and sustainable form of care outside of parental care within Africa.

Besides the above, the mixed evidences from this review may indicate that the wellbeing of children in kinship care cannot be generalised but may be predicted based on various factors. The degree of relatedness of the child to the carer, socioeconomic status of fostering household, gender, age and fostering reasons have been reported to influence the wellbeing outcomes of children in

kinship care. The degree of relatedness appears to be a very important factor in the wellbeing of fostered children. More studies in this review examined and concluded that there is a positive significant relationship between the carer relatedness and the well-being of the child in kinship care. The included studies suggested that children living with close relatives (grandparents and siblings) do as well as children living with parents. Specifically, most studies that reported on educational enrolment and nutritional status reported that the degree of relatedness is a positive correlate of wellbeing outcomes. Children living with non-relatives were reported to be disadvantaged in comparison to children living with their parents.

Additionally, the fostering household social economic status is reported to be a decisive factor for wellbeing outcomes. Fostering household with high social economic status may be able to provide children with better care than their parental household. Notwithstanding, that the studies that compared kinship care to institutionalised care in this review were inconclusive. The studies corroborate with previous literature as regards poorer economic conditions of fostering households (Cuddeback, 2004). They reported that the residential homes were well funded by foreign organisation and had trained personnel.

The benefits of kinship care for children seems to be largely dependent on the relationship of the child to the foster carer and the socioeconomic status of the kinship carer. The evidences therefore support the prediction of Hamilton's rule in respect to kinship care. The rule predicts that the closer the child is related to the caregiver the higher chances of better well-being for the child because resources in the fostering household are allocated to children based on their relationship to the caregiver. In families with scarce economic resources, children who are less closely related to the caregiver may suffer discrimination. This indicates that the effects of kinship care on children could be positive or negative based on the relationship of the child with the foster caregiver and the socioeconomic status of the foster caregiver.

However, several limitations must be noted. First, the different methodologies, assessment criteria, contexts, samples and findings in this review makes it difficult to come to an exact conclusion on the wellbeing of children in kinship care. The heterogenous nature of the included studies also makes it impossible to conduct a quantitative synthesis of evidences. Like previous research (Cuddeback, 2004; O'Higgins et al., 2017; Winokur, Holtan, & Batchelder, 2018) on kinship care, comparability of groups in the included studies is uncertain and undefined. There were no baseline

analyses and all studies were based on self-report. These give cause for caution in the interpretation of reports presented within the studies. In addition, kinship care has been compared to parental care by most studies (considering that it is the best form of care for children). We did not find an ample number of studies that compared kinship care to other alternative forms of care. Furthermore, some domains of child wellbeing (cognitive development, psychological and social wellbeing) had no or few studies which makes it difficult to draw any conclusion regarding them. In addition, we excluded studies that did not compare children in informal foster care with other settings, and only studies reported in English language were included in the review. Given that there are a large number of francophone or Arabic-speaking countries in Africa, it is likely that this review has excluded some other relevant studies.

Conclusion

Conclusively, this review points to the need for more substantive research on kinship care. More evidence is needed to understand the wellbeing of children in kinship care. Future research could employ qualitative longitudinal study designs to assess the wellbeing of children in foster care(Cuddeback, 2004; Winokur et al., 2018). Systems that would facilitate the availability of data on kinship care should be put into place within African countries. For policy makers, we suggest that systems that encourage kinship care with closer family kin be put in place. Poor families with vulnerable children or fostered children should be supported with economic strengthening programs.

Acknowledgment

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Table 1: Table of included studies

Study, year country	**Methodology**	**Group compared**	**Outcomes measured**	**Wellbeing outcome**
Hampshire et al. (2015) ***Ghana and Malawi***	Mixed; cross sectional	***Fostered not orphaned*** children *(n=117 in Ghana,87in Malawi)* ***orphaned and fostered*** *(n= 65 in Ghana,72 in Malawi)* ***Living*** with at least a ***biological parent*** *(n=762 in Ghana,748 in Malawi)*	School enrollment, attendance, and progress.	Contrasting result in the two countries. In Ghana children *fostered not orphaned* had lower school enrollment and attendance than biological parent. In Malawi *fostered double orphans* had lower school enrollment and attendance.
Zimmerman (2003) ***South Africa***	Quantitative; cross sectional	Children living with ***parent*** and ***fostered children*** *Group sample size is not available, total sample size is 8627*	School enrollment and domestic labour	No difference in school enrollment and time spent on household chores for both groups.
Case et al. (2004) ***Niger, Ghana, Kenya, Malawi, Mozambique, Namibia, Tanzania,***	Quantitative, cross sectional;	***Orphans*** and ***non-orphans*** in the same household *n is not available; DHS data was used*	School enrollment	Lower school enrollment for fostered orphans than their non-fostered counterparts living in the same household.

Uganda, Zambia, Zimbabwe				
Akresh (2004) ***Burkina Faso***	Quantitative, Panel study;	***Fostered children*** *(n=316);* ***Host siblings*** *(n=640);* ***biological siblings of fostered children*** *(n=994);* children in household that ***never fostered*** *(n=470)*	School enrollment	Children living in kin care experience increased enrollment after fostering.
Eloundou-Enyegue and Shapiro (2004) ***Cameroon***	Quantitative; cross sectional;	***Fostered*** and ***non-fostered*** children *Group sample size=NA; Total sample size=2257*	School enrollment	Fosterage reduces the risk of drop out when compared with children with similar characteristics, but not fostered.
Roby et al. (2016) ***Zimbabwe, Malawi, Niger, Uganda, Mozambique***	Quantitative; cross sectional;	***Children living with***: parent, grandparent and sibling, relatives (niece and nephews), other relative and non-relative *Group sample size=NA; Total sample size=124592*	School attendance	No difference in school attendance for children living with grandparents and sibling compared with parents, but a lower chance of attending school for children living with relatives and non- relatives.

Yamano et al. (2006) ***Uganda***	Quantitative; cross sectional;	***Orphan fostering household*** *(n=165);* ***households with own orphans*** *(n=55);* ***households with no orphans*** (fostered children and non- fostered children=*720*	School attendance	Double female orphans living in kinship care are more disadvantaged than other orphans.
Lachaud et al. (2016) ***Burkina Faso***	Quantitative; cross sectional;	***Fostered*** children and ***non-fostered*** children**.** *Group sample size= NA; Total sample size=1373.*	School enrollment and attendance of post primary school	Fostered children are less likely to be enrolled in school and attend post primary school
Parikh et al. (2007) ***South Africa***	Quantitative, longitudinal study	***Non-orphans*** in the same household with orphans*(n=87);* ***orphans*** in the same household with non-orphans *(n=87);* orphans living in ***orphan only households*** *(n=50);*	Grade normalized for age, annual expenditure on schooling, BMI, work outside and inside of home	There is no statistically significant difference in health, education and labour outcomes for orphans and non-orphans living in the same households
Brown (2009) ***Namibia***	Quantitative, cross sectional;	***Non-fostered*** children and ***fostered*** children	Education in years and nutrition parameters ***(nutrition not***	No difference in education for children fostered by relatives compared with children living with

		Group sample size is not available; total sample size is 4030	***reported for fostering)***	parent but lesser education for children fostered by non-relatives.
Gage (2005) ***Ghana***	Quantitative, cross sectional,	***Non-fostered*** children and ***fostered*** children *Group sample size not available; total sample size =2369*	School enrollment and labour force participation	There is no significant difference between groups
Zimmerman (2005) ***Malawi***	Qualitative cross-sectional studies,	Orphans living in ***orphanages*** *(n=23*); with ***foster parents****(n=27)*	School attendance, health care, school performance, food variety and quantity, clothing, living space, domestic work, sanitation facilities, caregiver behaviour,	Children in orphanage had better care than children in foster care for all outcome measured

			concept of future prospect	
Deininger et al. (2003) ***Uganda***	Quantitative, Panel study	***Fostered*** children and ***non-fostered*** children *Group sample size not available, total sample size 1300 households*	Access to education services and health services	No significant differences in access to education for both groups but lower access to health services(vaccination) for fostered children.
Tamasane and Head (2010) ***South Africa***	Quantitative, cross sectional	**Children living with:** parent, grandmothers, other relative, non-relative *Group sample size not clear total sample size is 5188 households*	School attendance, access to welfare grants, number of meals per day, possession of birth certificate	No statistically significant difference across group for all outcome measured.
Scelza and Silk (2014) ***Namibia***	Quantitative, cross sectional	children in ***parental care*** and ***fostered*** children *Group sample size not available, total sample size 192 children,117 women*	Weight for height, height for age, weight for age	Fostered children are more deficits than biological children although weight for age is the only statistically significant.

Prall and Scelza (2017) ***Namibia***	Mixed, cross sectional	Children living with ***parent or mother*** *(n= 130)* and ***fostered*** children *(n= 80)*	Weight for height, height for age, BMI-Z scores	Fostered children fare worse than non-fostered children in nutritional outcomes
Madhavan and Townsend (2007) ***South Africa***	Mixed, Cross sectional	***Children living with***: parent, grandparent and maternal female kin.	Height for age, BMI and weight for age	Living with maternal female kin doubles the chance of being nutritionally deficient.
Roby et al. (2014) ***Uganda***	Quantitative, Cross sectional	Children living with: ***parent*** *(n=226)*; ***grandparent or sibling*** *(n=220)*; ***niece or nephews***(*n=53*); ***other relatives*** and ***non-relatives*** *(n=22)*	Food equity, labour equity and school attendance	No difference in labour equity between children living with grandparents and children living with their parents. However, living with other relative, niece and nephews is negatively correlated with labour equity.
Ushie et al. (2016) ***Nigeria***	Quantitative, cross sectional descriptive	Children in ***kin care****(n=157);* children in ***residential homes*** *(n=157)*	Child abuse, child caregiver relationship	No statistically significant difference in exposure to abuse in both groups but a better positive child caregiver relationship in residential care than in foster care.

Beck et al. (2015) ***Senegal***	Quantitative, cross sectional	***Fostered*** children *(n=745);* ***Host siblings*** of fostered children *(n=1432);* ***non-fostered*** biological sibling of fostered children *(n=643)*	School enrollment, involvement in domestic task and economic work	Foster children do not differ compared (for all outcome measured) to host siblings when compared to all other children.
Caserta et al. (2017) ***Rwanda***	Quantitative, cross sectional	Children living in: ***child headed households*** *(n=115);* ***orphanages*** *(n=101);* ***kin care****(n=123)* and ***street*** *(n=81).*	Psychosocial wellbeing (emotional wellbeing and mental stress)	Orphans in orphanage have the highest emotional wellbeing and lower level of mental distress
Wolff and Fesseha (2005) ***Eritrea***	Mixed, cross sectional	Orphans in ***kin care****(n=40)*, small group homes*(n=NA)*, large institutions *(n=NA)* and children raised in their homes*(n=40)*	Emotional wellbeing (self-esteem, self-reliance, personal relationship and adaptability) and clinical symptoms of emotional distress (anxiety, depression, and withdrawal)	Orphans in kin care had greater adaptive skills than institutional orphans but as many signs and symptoms of emotional distress as orphanage children.

Verhoef and Morelli (2007) ***Cameroon***	Qualitative, cross sectional	***Non-fostered*** children *(n=15)* and ***fostered*** children *(n=15)*	Children activities (time spent on play, work, study, visit)	No statistically significant differences in time spent to on work, study, play and visit between groups.

Table 2: Assessment of methodological quality of quantitative (and quantitative part of mixed method) studies

Study	**Methodology**	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Total/average**
Prall and Scelza (2017)	Mixed	Yes	Yes	NA	Yes	Unclear	Unclear	yes	Yes	6/8
Wolff and Fesseha (2005)	Mixed	Yes	Yes	NA	Yes	Yes	Yes	yes	Yes	8/8
Hampshire et al. (2015)	Mixed	Yes	Yes	NA	Yes	Yes	Yes	Unclear	Yes	7/8
Madhavan and Townsend (2007)	Mixed	Yes	Yes	NA	Yes	Yes	Yes	yes	Yes	8/8
Roby et al. (2014)	quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Roby et al. (2016)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Tamasane and Head (2010)	Quantitative	Yes	Yes	NA	Yes	Unclear	Unclear	Unclear	Yes	5/8
Ushie et al. (2016)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Caserta et al. (2017)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	7/8
Beck et al. (2015)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Brown (2009)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Yamano et al. (2006)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Unclear	Yes	7/8

Zimmerman (2003)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Lachaud et al. (2016)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Case et al. (2004)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Scelza and Silk (2014)	Quantitative	Unclear	Yes	NA	Yes	Yes	Yes	Yes	Yes	7/8
Gage (2005)	Quantitative	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	8/8
Eloundou-Enyegue and Shapiro (2004)	Quantitative	Yes	Yes	NA	Unclear	Yes	Yes	Unclear	Yes	6/8

Table 3: Assessment of methodological quality of Panel studies

Study	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Total**
Akresh (2004)	Yes	Yes	NA	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	11/11
Parikh et al. (2007)	Yes	Yes	NA	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	11/11
Deininger et al. (2003)	Yes	yes	NA	Yes	Yes	NA	yes	Yes	Yes	Yes	yes	11/11

Table 4: Assessment of methodological quality of qualitative (and qualitative part of mixed method) studies

Study	**Methodology**	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**total**
Verhoef and Morelli (2007)	qualitative	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	9/10
Zimmerman (2005)	qualitative	Yes	Yes	yes	yes	yes	Yes	Yes	yes	unclear	yes	9/10
Prall and Scelza (2017)	Mixed	Yes	Yes	no	No	No	No	No	no	no	yes	3/10
Wolff and Fesseha (2005)	Mixed	Yes	yes	yes	yes	yes	No	No	no	yes	yes	7/10
Hampshire et al. (2015)	Mixed	Yes	Yes	Yes	yes	yes	Yes	NO	yes	yes	Yes	9/10
Madhavan and Townsend (2007)	Mixed	yes	Yes	yes	No	yes	yes	No	No	Unclear	yes	6/10

APPENDIX A: JBI Critical Appraisal Checklist for Qualitative Research(Lockwood et al., 2015)

Reviewer_____Date_____Author _____Year_____Record Number _____

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	□	□
2. Is there congruity between the research methodology and the research question or objectives?	□	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	□	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	□	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	□	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	□	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	□	□	□
8. Are participants, and their voices, adequately represented?	□	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	□	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	□	□	□	□

Overall appraisal: Include □ Exclude □ Seek further info □

Comments (Including reason for exclusion)

_____

APPENDIX B

JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies(Moola et al., 2017)

Reviewer_____Date_____

Author _____Year_____Record Number _____

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	□	□	□	□
2. Were the study subjects and the setting described in detail?	□	□	□	□
3. Was the exposure measured in a valid and reliable way?	□	□	□	□
4.Were objective, standard criteria used for measurement of the condition?	□	□	□	□
5.Were confounding factors identified?	□	□	□	□
6.Were strategies to deal with confounding factors stated?	□	□	□	□
7.Were the outcomes measured in a valid and reliable way?	□	□	□	□
8.Was appropriate statistical analysis used?	□	□	□	□

Overall appraisal: Include □ Exclude □ Seek further info □

Comments (Including reason for exclusion)

_____

APPENDIX C

JBI Critical Appraisal Checklist for Cohort Studies(Moola et al., 2017)

Reviewer_____Date_____

Author _____Year_____Record Number _____

	Yes	No	Unclear	Not applicable
1.Were the two groups similar and recruited from the same population?	□	□	□	□
2.Were the exposures measured similarly to assign people to both exposed and unexposed groups?	□	□	□	□
3.Was the exposure measured in a valid and reliable way?	□	□	□	□
4.Were confounding factors identified?	□	□	□	□
5.Were strategies to deal with confounding factors stated?	□	□	□	□
6.Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?	□	□	□	□
7.Were the outcomes measured in a valid and reliable way?	□	□	□	□
8.Was the follow up time reported and sufficient to be long enough for outcomes to occur?	□	□	□	□
9.Was follow up complete, and if not, were the reasons to loss to follow up described and explored?	□	□	□	□
10.Were strategies to address incomplete follow up utilized?	□	□	□	□
11.Was appropriate statistical analysis used?	□	□	□	□

Overall appraisal: Include □ Exclude □ Seek further info □

Comments (Including reason for exclusion)

_____

APPENDIX D: Search string on Databases

Web of Science: Result count=33

((TS=CHILD*) AND (TI=(KINSHIP CARE* OR "INFORMAL CARE*" OR "ALTERNATIVE CARE*" OR "FOSTER CARE*" OR "EXTENDED FAMILY CARE*" OR "GUARDIANSHIP CARE*"OR "ORPHAN CARE*"OR"CHILD FOSTERAGE*"OR"CARE FOR ORPHANS*"OR"DOMESTIC ADOPTION*" OR"RELATIVE CARE*"OR "TRADITIONAL SAFETY NET*"))) *AND* **LANGUAGE:** (English) *AND* **SPECIES:** (Humans) Refined by: **LANGUAGES:** (ENGLISH) AND **[excluding]: PUBLICATION TYPES:** (HISTORICAL ARTICLE OR GUIDELINE OR COMMENT OR META ANALYSIS OR PRACTICE GUIDELINE OR EDITORIAL OR LETTER OR NEWS) [excluding]COUNTRIES/REGIONS: (USA OR ENGLAND OR FINLAND OR AUSTRALIA OR ESTONIA OR CANADA OR PEOPLES R CHINA OR NETHERLANDS OR AUSTRIA OR SWEDEN OR HUNGARY OR SPAIN OR NORTH IRELAND OR IRAN OR GERMANY OR PORTUGAL OR IRAQ OR NEW ZEALAND OR RUSSIA OR NORWAY OR JORDAN OR BELGIUM OR KUWAIT OR DENMARK OR MALAYSIA OR SCOTLAND OR PHILIPPINES OR WALES OR CHILE OR ISRAEL OR SOUTH KOREA OR INDIA OR IRELAND OR U ARAB EMIRATES OR ITALY OR ROMANIA OR SLOVENIA OR SWITZERLAND OR LITHUANIA OR GUINEA BISSAU OR BRAZIL OR SERBIA OR CROATIA OR SAUDI ARABIA OR FRANCE)Timespan: 2000-2017

*The same search string used for web of science core ollection was used to search on Biosis citation index, SciELO citation Index, and Medline databses.

Result count from **Medline**=8

Result count from **SciELO citation Index** =5

Result count from **Biosis citation index** =10

Scopus: Result count=123

(TITLE-ABS-KEY (child*) AND TITLE-ABS-KEY (kinship AND care) OR TITLE-ABS-KEY (informal AND care) OR TITLE-ABS-KEY (extended AND family AND care) OR TITLE-ABS-KEY (domestic AND adoption) OR TITLE-ABS-KEY (alternative AND care) AND TITLE-ABS-KEY (child AND fosterage) OR TITLE-ABS-KEY (care AND for AND orphans) OR TITLE-ABS-KEY (foster AND care) OR TITLE-ABS-KEY (guardianship AND care) OR TITLE-ABS-KEY (orphan AND care) OR TITLE-ABS-KEY (relative AND care) OR TITLE-ABS-KEY (traditional AND safety AND net) OR TITLE-ABS-KEY (domestic AND adoption)) AND PUBYEAR > 2000 AND PUBYEAR < 2017

Excluded non-Africa countries. Including only Countries in Africa and undefined countries. Language: limit to English. Limited by document type: limit to article, article in press, conference paper, short survey and note

African journal online AJOL: Result count=17

(child*) and kinship care* or "informal care*" or alternative care* or "foster care*or extended family care* or "guardianship care''*or "orphan care*" or "child fosterage*" or "care for orphans*" or "domestic adoption*" or "relative care*" or "traditional safety net*

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