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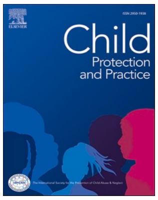

Subjective well-being of Kenyan children reunified with families from residential care institutions: A closer look at child disability

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ABSTRACT

Background: Living in residential care has been well documented as causing harm to children in some parts of the world, especially children with disabilities. However, very little empirical research has looked at the intersection of child disability and living in residential care in Kenya or elsewhere in Sub-Saharan Africa.

Objective: To examine how the subjective well-being of children who reunified with family after living in residential care may vary by child disability status, as well as by other child characteristics such as orphanhood status.

Participants and Setting: Children aged 11 to 17 receiving services from an initiative that oversaw the reunification of children from residential care into families in three counties in Kenya.

Methods: We drew upon a cross-sectional household survey of $N = 105$ children and conducted multiple linear regressions with clustered errors that controlled control for child sex, age, and time since family reunification.

Findings: Children with disabilities, who comprised 13 % of the sample, had lower self-reported well-being in the domains of basic needs, leisure and freedom, and care and safety, and a larger decrease in life satisfaction after reunification, compared to children without disabilities.

Conclusion: Further research must examine reasons for this lower well-being, and policymakers should strengthen supports for children with disabilities who are reunifying with families after living in residential care.

1. Introduction

Worldwide, some 5.4 million children are living in residential care, despite the UN Convention on the Rights of the Child calling on national governments to prioritize family-based care and only use institutional care when necessary (United Nations General Assembly, 1989; United Nations General Assembly, 2010; Cantwell et al., 2012; Desmond et al., 2020). Many children with disabilities live in residential care, although the exact numbers are unknown. In fact, children with disabilities are so at risk of being placed in residential care that human rights frameworks explicitly affirm their right to live in a family. The UN Convention on the Rights of Persons with Disabilities states that persons with disabilities have "equal rights with respect to family life" and that "[i]n no case shall a child be separated from parents on the basis of a disability" (United Nations General Assembly, 2006, art. 23). Furthermore, it asserts that national governments must, "where the immediate family is unable to

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care for a child with disabilities, undertake every effort to provide alternative care within the wider family, and failing that, within the community in a family setting" (United Nations General Assembly, 2006, art. 23).

Around 50,000 to 60,000 children live in residential care institutions (RCIs) in Kenya, due to poverty, violence, maltreatment, and the stigmatization of HIV and disability (Chege & Ucembe, 2020; Desmond et al., 2020; Morantz et al., 2013). While it is unknown how many of these children have disabilities, the UN Committee on the Rights of Persons with Disabilities (2015) has declared its concern at how many children with disabilities in Kenya are institutionalized, abandoned, rejected by their families, and stigmatized.

1.1. *Outcomes of living in residential care*

The harms of living in RCIs have been well documented. Living in RCIs is strongly associated with poor developmental outcomes in cognition, attention, and physical growth, and moderately associated with socioemotional, mental health, and attachment difficulties (van IJzendoorn et al., 2020). Fortunately, when children in RCIs join families, they can quickly improve in growth, cognition, and adaptive functioning (Humphreys et al., 2018; van IJzendoorn et al., 2020). These findings mostly come from children who have been internationally adopted into high-income countries (van IJzendoorn & Juffer, 2006) and children who have entered local foster care (Zeanah et al., 2017), but rarely from studies of children who have been reunified with their original families (James et al., 2017). The duration of time children spend in RCIs has also been linked to more developmental delays and poorer rates of developmental catch-up (van IJzendoorn et al., 2020), but this finding mostly comes from research on very young children in Europe.

Studies that try to untangle the impacts of living in and leaving residential care on child well-being in Sub-Saharan Africa are rarer and have shown varied results. Children reunified with families after living in RCIs in Ghana had higher levels of hope compared with their peers who remained in residential care, but generally speaking, children in residential care had better access to resources, including education, health care, nutrition, and shelter, than those in family care (James et al., 2017; James & Roby, 2019). This is one of the only quantitative studies that we could identify that compared children in Africa who reunified with local families with those still in residential care; we could not find any on children in Kenya.

Research has, however, compared Kenyan children in residential care with children in families who have not necessarily ever lived in residential care. One study found that children in RCIs had better outcomes in terms of nutrition, mental health, resilience, having their basic materials needs met, and completing primary school, as well as fewer experiences of sexual abuse and transactional sex, while children in families had better outcomes in secondary school completion and fewer experiences of traumatic events (Apedaile et al., 2022; Atwoli et al., 2014; Braitstein et al., 2013; Embleton et al., 2014, 2017; Omari et al., 2021; Sutherland et al., 2022). However, reunified children may have different outcomes than children who have never lived in residential care.

Emerging qualitative work suggests that other child outcomes may be affected by living in residential care. A scoping review of children's experiences in RCIs in low- and middle-income countries found that children enjoyed material benefits of orphanages, struggled with favoritism by orphanage staff, wished to have greater autonomy and decision-making over their lives, sought greater connection to their communities and biological families, and struggled with identity, sense of belonging, and being stigmatized as an orphan (Roche, 2019). Similar themes arose in interviews with youth in Kenya (Gayapersad et al., 2019). These phenomena have rarely been assessed in quantitative studies, however.

For this reason, the outcome of this quantitative study is child subjective well-being. Well-being is broadly defined as positive life outcomes, and can be conceptualized as objective (observable measures like household income and medical diagnosis) and subjective (based on an individual's own perspective and opinion on their life) (Voukelatou et al., 2021). Subjective well-being may also be referred to as happiness or life satisfaction (Voukelatou et al., 2021). The quantitative evidence base on outcomes and well-being for children who have lived in residential care is mostly centered around objective well-being, while children's own subjective well-being is rarely measured (Neville et al., 2024). This study, therefore, examines correlates of child subjective well-being among a sample of children who have been reunified with family after living in residential care institutions in Kenya, as well as their perspectives on whether their life was better in residential care or after reunification.

1.2. *Child disability and residential care*

Child disability is a risk factor for entering residential care in lower- and middle-income countries worldwide (Berens & Nelson, 2015; Browne, 2009; Sherr et al., 2017). In Kenya, an investigation by Disability Rights International found that children with disabilities such as cerebral palsy, spina bifida, autism, intellectual disability, blindness, and deafness, were at particular risk of being placed in residential care due to poverty, stigma related to their disabilities, and lack of social services needed for their care (Rodríguez et al., 2018). They quoted one government official as saying, "culture still plays a role as having a child with a disability is said to be taboo and there are also financial constraints for most families. Unable to take care of their children, some parents place the children in institutions" (Rodríguez et al., 2018, p. 18). This stigma and difficulty is widespread in Sub-Saharan Africa, where disability may be associated with witchcraft and being "cursed" (United Nations, 2018).

Researchers also theorize that living in residential care can cause disabling conditions. Physical and socioemotional deprivation and lack of individualized attention in RCIs can cause difficulties with cognitive development, attention, attachment, and other domains of functioning, which are not well accommodated in an ableist environment (Dozier et al., 2012; van IJzendoorn et al., 2020). Trauma can also lead to functional difficulties, particularly around emotions and attention (Schüssler-Fiorenza Rose et al., 2014; La Greca et al., 2008). All children in RCIs have experienced the traumatic event of family separation, and in addition, they may experience other traumas in residential care such as abuse (Gray et al., 2015). For these reasons, it is very likely that entering and living in residential care can cause the development of cognitive, behavioral, attention, and emotional disabilities. Little research has examined this in Kenya, though it has been noted that children in RCIs often develop attachment disorders (Rodríguez et al., 2018).

Unfortunately, little research has measured the prevalence of disability among children connected to residential care in Sub-Saharan Africa or examined their well-being outcomes. Two exceptions are Ghana and South Africa. In Ghana, 20 % of children in RCIs have a disability, most commonly difficulties with learning and memory, making friends, communicating, accepting change, and controlling behavior (Ghana Department of Social Welfare & UNICEF, 2021). In South Africa, 5 % of children with disabilities lived in RCIs compared to only 0.5 % of children without disabilities, and 20 % of children in RCIs had severe disabilities compared to only 2 % of children in families, according to a 2001 census (Department of Social Development et al., 2012). We could not locate any comparable studies of Kenya. Notably, the Ghana and South Africa studies measured disability in different ways. The conceptualization and measurement of child disability must be done with care in order to ensure comparability between studies.

1.3. Theoretical framework and measurement of child disability

This study uses the World Health Organization's International Classification of Functioning, Disability, and Health (ICF) to conceptualize disability (World Health Organization, 2007, p. 322). Disability has traditionally been framed through a medical model, which conceptualizes disabilities as being caused exclusively by impairments in individuals' bodies. The ICF, on the other hand, is a bio-psychosocial model of disability, which conceptualizes disability as a phenomenon that arises from the interaction between an individual's health conditions and their environment. That is, a person can only be "disabled" to the extent that their physical environment, social context, or local laws limit their ability to function effectively in society—barriers in society, not just the condition of a person's body, cause disability (World Health Organization, 2007, p. 322).

Specifically, the ICF posits that an individual's health conditions interact with environmental factors (e.g., laws, infrastructure, cultural attitudes) and personal factors (e.g., age, sex) to affect their body structures and functions (e.g., limbs, breathing, seeing) and their ability to complete activities and participate in life situations (e.g., self-care, walking, communicating with others, completing household tasks). For example, an autistic child may have a neurological factor (health condition) that makes him uncomfortable hearing loud noises (body function). If schools in this child's area are all large, noisy, and crowded and there are no alternatives (environmental factors), the child may not be able to access an education (participation, activities). Thus, his autism is disabling due to the unaccommodating educational system. These dynamics are illustrated in Fig. 1.

Since the current study uses this bio-psychosocial model of disability, it does not rely on medical diagnoses, cognitive tests, or the Diagnostic and Statistical Manual of Mental Disorders to determine if a child has a disability (see Fig. 1). Rather, we focus on the *activities* portion of the ICF model; children are considered as having a disability depending on the extent to which they have difficulties doing activities, if those activity limitations put them at greater risk than other children of the same age of "experiencing limited participation in an unaccommodating environment" (UNICEF/Washington Group on Disability Statistics, 2017, p. 2). This model is particularly helpful for looking at children, as the measurement of child disability is complicated by the fact that children have different developmental expectations at different ages and may reach milestones at different rates. This study employed the Washington Group/UNICEF Child Functioning Module (CFM), which is based on the ICF model (Washington Group & UNICEF, 2016) and assesses whether children have functional difficulty in the domains of vision, hearing, mobility, self-care, communication, learning, concentration, accepting change, controlling behavior, making friends, anxiety, and depression.

1.4. Study aim

There is clearly an important, complex relationship between child disability and living in residential care, but we could not identify any research about disability and children who reunified with family after living in residential care, despite the extant literature suggesting that this is an area worth investigation. The aim of this study, then, is to examine, among a sample of children who have been reunified with family after living in residential care institutions in Kenya, how child characteristics and experiences are associated with their subjective well-being. Our primary aim is to evaluate our hypothesis that, when controlling for child sex, age, and time since family reunification, children with disabilities have worse subjective well-being and more negative experiences of reunification than children without disabilities. Our exploratory aim is to examine how subjective well-being may vary by orphanhood, parental care status, time since reunification, years in residential care, household hunger, age, and sex.

2. Method

2.1. Study context

This study was conducted with participants of Changing the Way We Care (CTWWC), an initiative that promotes safe family care for children by reforming national systems of care for children and delivering programs for family strengthening, family reintegration, and the prevention of unnecessary child-family separation. In Kenya, like in other nations in which they work, CTWWC works with local non-governmental organizations to identify and support families at risk of separation and to prepare and support children to reunify with family (immediate or extended) after living in residential care. Family strengthening support to these families includes case management, cash transfers, savings and loans groups, parenting education, and referrals. CTWWC explicitly

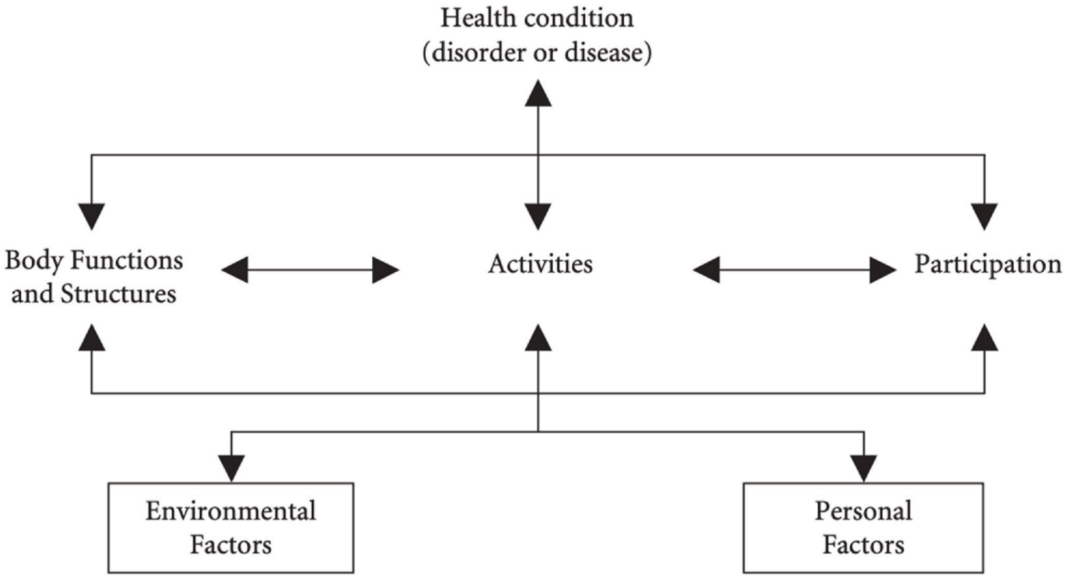

Fig. 1. The ICF Model
Note. From *International classification of functioning, disability and health: Children & youth version* (17) by World Health Organization, 2007. Copyright 2007 by World Health Organization.

includes children with disabilities in their programming, and identifying, utilizing, and advocating for supportive policies and services for children with disabilities is part of CTWWC's advocacy work in Kenya (Changing the Way We Care, 2021). This study draws on data from a household survey of CTWWC participants in Kenya who were either receiving services because a child had been reunified with family after living in an RCI or because the child was considered at risk of entering an RCI. The study was approved by the Boston College Institutional Review Board and the Maseno University Ethics Review Committee.

2.2. Sampling and recruitment

A family was considered eligible for the survey if they had begun receiving services from CTWWC before June 1, 2021, and data were collected in October 2021. To promote trust and legitimize the survey activity, case managers first contacted households by phone to let them know that they would be invited to participate in the study. Then, enumerators who were not CTWWC staff or case managers, but staff of an outside data collection firm, called to formally invite them to the study, let them know their participation would be voluntary and confidential, and schedule interviews. These enumerators visited families in their homes and conducted the surveys verbally, recording respondents' answers on tablets.

The primary caregiver within each family (identified as the individual listed as such in CTWWC's database) gave their informed consent to participate in the survey. They completed a survey about themselves and their household. They also completed a survey about each child in their care who had been reunified from residential care or was receiving individualized case management due to being at risk of entering residential care. It was possible for one household to have more than one child receiving individualized case management; in these cases, the caregiver responded about each child.

Where a child was aged 11 or older, the child was also invited to complete a self-report survey. Their participation was voluntary, and in order for them to respond to the survey, their caregiver provided caregiver informed consent (i.e., permission) for the child to participate, and the child provided their own assent.

A total of 295 caregivers with children receiving services from CTWWC Kenya were eligible to be surveyed, and 89 % ($n = 263$) of these completed a survey. The reasons caregivers were unable to be surveyed were relocation ($n = 15$ caregivers), inability to be contacted ($n = 4$), illness/disability ($n = 5$), and other ($n = 8$). There were 257 children ages 11 and above eligible to complete a child self-report survey, of whom 55 % ($n = 142$) did so. The most common reasons for children not completing surveys were being at boarding school ($n = 76$ children), relocating or no longer living with the caregiver ($n = 12$), having returned to residential care without the knowledge of the case worker ($n = 6$), not meeting eligibility requirements or other data error ($n = 6$), having run away or not being traceable ($n = 5$), disability/illness ($n = 5$), having been married ($n = 2$), and inability to be reached due to being in day school ($n = 2$).

2.3. Participants

We limited our analysis to the 126 children who had been reunified after living in residential care. While many children were reunified with their biological parents, many were also reunified with extended family. These 126 children, ages 11 to 18, lived in 106 households. Ninety households (84.9 %) contained one surveyed child, 14 households (13.2 %) contained two, and two households (1.9 %) had three children surveyed. After excluding participants who had data missing on any independent variable (see Measures section), the analytic sample resulted in $N = 105$ children.

2.4. Measures

2.4.1. Independent variables

Orphanhood, parental care status, time since reunification, years in residential care, household hunger, and disability status were included as independent variables. Covariates also included child age (0 % missing) and sex (0 % missing).

2.4.1.1. Orphanhood. Data regarding the survival status of the child's biological parents were recoded into a categorical variable of orphanhood in which 0, the reference group, represented non-orphan (both parents alive), 1 was single orphan (deceased father or mother), and 2 was double orphan (both parents deceased). Five cases were missing (4.0 %), mostly because the caregiver did not know if one of the parents was alive.

2.4.1.2. Parental care. The primary caregiver (who may have been the child's biological mother or father, grandparent, aunt, uncle, etc., depending on with whom they were reunified) was also asked whether the child was living with his biological mother or father. These data were re-coded into a categorical variable of parental care status in which 0 (the reference group) represented living with both parents, 1 was living with one parent, and 2 was living with neither parent. No cases contained missing data.

2.4.1.3. Days since reunification. The date that the child was reunified, in day-month-year format, was obtained from CTWWC's case management database. This date was subtracted from the date of the survey to calculate a variable of the number of days that had elapsed since reunification. There were no missing cases.

2.4.1.4. Years in RCI. Caregivers reported how old the child was when they first entered residential care and how old they were when they most recently came to live with them. The difference between these variables was calculated to create a variable of the approximate number of years the child spent in residential care. Thirteen cases were missing (10.3 %).

2.4.1.5. Household hunger. The Household Hunger Scale was used as a proxy for economic deprivation (Ballard et al., 2011). We chose this measure as it was specifically developed for cross-cultural use (Ballard et al., 2011), which was useful for the larger CTWWC evaluation under which this household survey was included. As part of the caregiver survey, caregiver respondents were asked if over the past four weeks their household ever lacked food entirely, if anyone in their household went to sleep hungry, or if anyone in their household ever went a whole day and night without eating. Each question was scored as 0 for no, 1 for rarely or sometimes, and 2 for often. The three questions were summed into a score ranging from 0 to 6 in which 0–1 represented little or no household hunger, 2–3 represented moderate hunger, and 4–6 severe hunger. There was no missing data.

2.4.1.6. Disability status. Caregiver respondents completed the Washington Group/UNICEF Child Functioning Module (CFM) about each child (Washington Group & UNICEF, 2016). The CFM, based on the World Health Organization ICF model, assesses whether children have functional difficulty in the domains of vision, hearing, mobility, self-care, communication, learning, concentration, accepting change, controlling behavior, making friends, anxiety, and depression. Caregivers were asked to rate children's level of difficulty in each domain (e.g., "Does [name] have difficulty concentrating on an activity that he/she enjoys doing?"), with options "no difficulty," "some difficulty," "a lot of difficulty," or "cannot do at all." For anxiety, caregivers were asked how often the child seemed "very anxious, nervous, or worried," and for depression, "very sad or depressed," with options "daily," "weekly," "monthly," "a few times a year," and "never." A child was considered as having a disability if they had a "a lot of difficulty" or "could not [function] at all" in at least one domain of functioning or if they seemed anxious or depressed every day. There were four cases of missing data (3.2 %).

2.4.2. *Dependent variables*

2.4.2.1. Overall life satisfaction. As part of the child survey, child respondents were asked, "How satisfied (or 'happy') are you with your life as a whole?" on a scale of 0–10, where 0 represented not at all satisfied and 10 completely satisfied ("current life satisfaction", 2 missing cases [1.8 %]). The wording of this question, which is originally from Campbell et al. (1976), is now widely used in the Personal Well-being Index – School Children (Cummins & Lau, 2005), and is also used with a visual aid in the Children's Worlds International Survey of Children's Well-Being (Children's Worlds, n.d.). A similar visual aid was added in this study to help respondents understand the scale (Fig. 2). The child was also asked to think about when they lived in residential care, and rate how happy or satisfied they were with their life at that time on the same scale ("life satisfaction in RCI", 2 missing cases [1.8 %]).

We subtracted participants' "life satisfaction in RCI" score from their "current life satisfaction" score to produce the variable "change in life satisfaction" (4 missing cases [3.2 %]). Change in life satisfaction could range from −10 to 10, where −10 represented the greatest possible decrease in life satisfaction between residential care and reunification, 0 represented no change, and 10 represented the greatest possible increase. This variable allowed us to assess children's experience of reunification, in the sense that it measured whether children felt their life was better or worse, and to what degree, after reunification, compared to their life in residential care.

2.4.2.2. Child-informed subjective well-being. Three measures of subjective well-being, which were developed through focus groups with children and young people who had lived in RCIs in Kenya and Guatemala (Neville et al., 2024), were also used. All of the items were statements to which respondents indicated how true the statements were for them (0 = none of the time, 1 = some of the time, 2 = all of the time). The mean across answers was calculated to serve as the subscale scores, wherein values could range from 0 to 2 and higher scores indicated greater well-being. The first subscale was "care and safety," which contained 12 items such as "I have someone to turn to for advice and guidance," "My parents/caregivers treat me with respect," and "I have someone to ask for help if I feel unsafe" (α = .88, 0 missing). The second was "basic needs," which contained 12 statements including "I have a comfortable place to sleep at night, "I can eat until I am satisfied," and "At home, I have everything I need to keep myself clean"; two items were reverse coded in this subscale (α = .80, 0 missing). Finally, the "leisure and freedom" subscale contained seven statements, including "I get to play and have fun", "I get along well with my friends," and "I have freedom to go out" (α = .79, 0 missing).

2.5. *Analysis*

Statistical analyses were completed in Stata 17 BE (StataCorp, 2021). nivariate descriptive statistics were used to describe the characteristics of the sample and the mean scores of the dependent variables. For bivariate statistics, we used Pearson's correlations to analyze relationships amongst continuous variables, *t*-tests to examine differences in means of continuous variables by child sex and disability status, and chi-squared tests to examine relationships between categorical variables. One-way ANOVAs were also used to compare means of continuous variables by orphanhood and parental care status, using Tukey post-hoc tests to examine significant differences. We used ordinary least squares regressions to analyze predictors of well-being, with standard errors adjusted for clustering at the household level. In multiple regression analyses, missing values were managed via listwise deletion (Schafer, 1999); to mirror this in our other analyses, we excluded cases that had any missing independent variables from the univariate and bivariate analyses. We used the *margins* command to assess the absolute direction of the change in life satisfaction variable in regression models.

3. Results

3.1. *Univariate results*

Univariate statistics are presented in Table 1. Boys were slightly overrepresented in the sample (57.1 %), and 73.3 % of children had lost one or both parents. More than half of children only lived with one of their biological parents, and 39.1 % of children were living with neither of their parents. Of children not in parental care, the primary caregiver was most often a grandparent (22 children), aunt or uncle (13), or sibling (10).

The average change in life satisfaction was 0.03 points (*SD* = 3.2). In the sample, 39.8 % of respondents had a negative change in life satisfaction, meaning that they rated their satisfaction with life in the RCI higher than their current life satisfaction, while 40.8 % had a positive change in life satisfaction (i.e., they were more satisfied with their current life than life in the RCI), and 19.4 % rated their current life satisfaction and satisfaction with life in the RCI the same (data not shown).

Fourteen children (13.3 %) in the analytic sample had a disability. Ten of these children had functional difficulties in only one domain, while four had difficulties in multiple domains (not shown). Nine children's difficulties were only in behavioral domains (depression, anxiety,

Fig. 2. Visual aid for life satisfaction questions
Note. Adapted from *12 Years-old questionnaire,* by Children's Worlds (n.d.), *8 Years-old questionnaire,* by Children's Worlds (n.d.), https://isciweb.org/the-questionnaire/using-the-questionnaires/, and from Pain scale chart consisting of eleven levels of pain, in *Shutterstock,* n.d., from https://www.shutterstock.com/image-vector/pain-scale-chart-consisting-eleven-levels-538565311.

Table 1

Descriptive statistics ($N = 105$).

	M (SD)	N (%)
Age	14.4 (2.1)	
Sex		
Female		45 (42.9 %)
Male		60 (57.1 %)
Orphanhood		
Non-orphan		28 (26.7 %)
Single orphan		58 (55.2 %)
Double orphan		19 (18.1 %)
Parental care status		
Both parents		10 (9.5 %)
Single parent		54 (51.4 %)
Neither parent		41 (39.1 %)
Days since reunification	526.4 (155.8)	
Years in residential care	4.8 (4.0)	
Household Hunger Score	1.0 (1.2)	
Disability status		
No disability		91 (86.7 %)
Has disability		14 (13.3 %)
Current life satisfaction[a]	7.5 (2.4)	
Retrospective life satisfaction	7.4 (2.5)	
Change in life satisfaction[a]	0.03 (3.2)	
Subjective child well-being subscales		
Care and safety	1.7 (0.4)	
Basic needs	1.3 (0.3)	
Leisure and freedom	1.6 (0.4)	

[a] N = 103.

controlling behavior, accepting change, or making friends). Two children had difficulty only in seeing, and one child only had difficulties in cognitive domains (learning, communication, remembering, and concentrating). One child had both cognitive and behavioral difficulties, and another child had hearing and cognitive difficulties.

3.2. Bivariate results

Correlations among continuous independent and dependent variables (Table 2) showed that children living in households with higher Household Hunger Scores had lower well-being in the basic needs domain (r = -0.38, $p < .001$), children who spent more time in residential care had lower leisure and freedom scores ($r = -0.20$, $p < .05$).

Children with disabilities had significantly worse outcomes in current life satisfaction ($t(101) = 2.00$, $p < .05$), change in life satisfaction ($t(101) = 2.53$, $p < .05$), care and safety ($t(103) = 3.18$, $p < .01$), basic needs ($t(103) = 2.46$, $p < .05$), and leisure and freedom ($t(103) = 3.89$, $p < .001$) (Table 3) compared to children without disabilities, but did not differ significantly on independent variables or covariates (not shown). No study variables differed significantly by child sex (not shown).

About two thirds of the single orphans in the study were living with a biological parent (Table 4). Out of the 28 participants who had two living parents, 17.9 % were not living with either of their parents.

Table 2

Pearson's r correlations ($N = 105$).

	Age	Days since reunification	Years in RCI	Household hunger
Current life satisfaction[a]	0.08	−0.14	0.03	−0.02
Life satisfaction in RCI	0.00	0.03	−0.08	−0.08
Change in life satisfaction[a]	0.06	−0.08	0.09	0.06
Care and safety	0.04	0.08	0.05	−0.04
Basic needs	−0.10	0.00	−0.14	−0.35***
Leisure and freedom	−0.05	0.03	−0.20*	−0.07

Note: Correlation statistically significant at * $p < .05$, ** $p < .01$, *** $p < .001$.

[a] $N = 103$.

Table 3

Comparison of means of outcome variables by disability status, M (SD) ($N = 105$).

	No disability	Disability
Current life satisfaction*[a]	7.7 (2.4)	6.3 (2.7)
Life satisfaction in RCI	7.4 (2.6)	8.0 (2.2)
Change in life satisfaction*[a]	0.3 (3.1)	−2.0 (2.7)
Care and safety**	1.7 (0.3)	1.4 (0.5)
Basic needs*	1.4 (0.3)	1.1 (0.4)
Leisure and freedom***	1.7 (0.3)	1.3 (0.5)

Note: T-test statistically significant at * $p < .05$, ** $p < .01$, *** $p < .001$.

[a] $N = 103$.

Table 4

Cross-tabs of orphanhood and parental care status ($N = 105$).

	Non-orphan	Single orphan	Double orphan
Both parents	10 (35.7 %)	0 (0 %)	0 (0 %)
Single parent	13 (46.4 %)	41 (70.7 %)	0 (0 %)
Neither parent	5 (17.9 %)	17 (29.3 %)	19 (100 %)
Total	28 (100 %)	58 (100 %)	19 (100 %)

One-way ANOVAs (not shown) found that the number of years a child lived in an RCI varied significantly by orphanhood ($F(2) = 7.78$, $p < .001$) and parental care status ($F(2) = 3.45$, $p < .05$). Specifically, single orphans spent significantly more time in residential care than non-orphans ($t = 3.88$, $p < .01$) and children living with both parents spent significantly less time in residential care than children living with neither parent ($t = 2.62$, $p < .05$). Orphanhood was also linked to change in life satisfaction ($F(2) = 4.57$, $p < .05$); non-orphans had significantly greater decreases in life satisfaction than single ($t = 2.72$, $p < .05$) and double orphans ($t = 2.54$, $p < .05$), meaning that compared to their current life, children with two living parents more strongly preferred life in residential care than children who had lost one or both parents. Care and safety scores varied significantly by orphanhood as well ($F(2) = 5.25$, $p < .01$), with non-orphans having significantly worse care and safety scores than single orphans ($t = 3.24$, $p < .01$).

3.3. Multivariate results

Multiple linear regression models for predicting current life satisfaction, life satisfaction in RCI, and change in life satisfaction can be found in Table 5. The models met the assumptions necessary for multiple linear regression: visual examination of standardized normal probability plots indicated that residuals had acceptable normality, and variance

Table 5

Regressions for life satisfaction (b, Robust SE).

	Current life satisfaction	Life satisfaction in RCI	Change in life satisfaction
Female	−0.81 (0.48)	0.32 (0.48)	−1.27 (0.61)*
Age	0.08 (0.13)	0.00 (0.14)	0.07 (0.18)
Orphanhood (ref = non-orphan)			
Single orphan	1.18 (0.78)	−0.67 (0.72)	2.09 (0.81)*
Double orphan	1.74 (0.85)*	−0.44 (1.10)	2.64 (0.99)**
Parental care (ref = both parents)			
Single parent	−0.85 (1.05)	−0.35 (0.95)	−0.72 (1.12)
Neither parent	−0.79 (1.08)	−0.69 (1.19)	−0.60 (1.11)
Days since reunification	−0.002 (0.001)	−0.001 (0.002)	−0.001 (0.002)
Years in RCI	−0.02 (0.08)	−0.02 (0.08)	0.01 (0.11)
Has disability	−1.19 (0.74)	0.61 (0.70)	−2.18 (0.97)*
Household hunger	0.01 (0.17)	−0.21 (0.20)	0.27 (0.26)
N	103	105	103
R^2	0.128	0.051	0.190
F	1.72	0.54	2.81**

Note: Statistically significant at * $p < .05$, ** $p < .01$, *** $p < .001$.

inflation factors (VIF) were under 10, indicating no concerns with multicollinearity.

For change in life satisfaction scores, when controlling for all covariates, the following statistically significant differences were found: girls decreased in life satisfaction while boys increased ($p < .05$); single orphans ($p < .05$) and double orphans ($p < .01$) had increases in life satisfaction, which were significantly different from non-orphans, who decreased in life satisfaction; and while children with disabilities had decreases in life satisfaction, children without disabilities had increases in life satisfaction ($p < .05$).

Table 6 displays multiple linear regression results for the child-informed subjective well-being subscales. Controlling for all covariates in the model, more years in RCI was associated with lower basic needs subscale scores ($p < .01$), children with disabilities had worse basic needs scores than those without disabilities ($p < .01$), and Household Hunger Scores were linked to lower basic needs scores ($p < .001$). In our regressions examining leisure and freedom scores, years in RCI predicted worse outcomes ($p < .01$) and children with disabilities had lower scores than those without disabilities ($p < .01$).

4. Discussion

Although many countries in Sub-Saharan Africa have adopted policy reforms that call for the family reunification of children living in residential care institutions, very little quantitative research has examined outcomes for reunified children. Furthermore, although advocacy organizations have been calling attention to the intersection of child disability and residential care placement for decades, to our knowledge, this is the first quantitative research to examine outcomes for children with disabilities who have lived in residential care in Sub-Saharan Africa.

The present study found that children with disabilities, who constituted 13 % of the sample, reported lower subjective well-being in the domains basic needs, leisure and freedom, and care and safety, compared to children without disabilities. In addition, children with disabilities reported decreased satisfaction with their lives in families compared to their previous lives in residential care, while children without disabilities reported a small increase, when controlling demographic characteristics. Children with disabilities did not have significantly lower satisfaction with their life in the RCI than children without disabilities, nor did they have lower satisfaction with their current lives; rather, they had a significantly larger discrepancy between the two—a more negative change in life satisfaction since reunification. As our study was unable to ascertain when the sampled children first began experiencing functional difficulties or ableism, two possible explanations for these findings could be as follows.

Table 6

Regressions for child-informed subjective well-being measures (b, Robust SE).

	Care and safety	Basic needs	Leisure and freedom
Female	0.02 (0.08)	0.02 (0.06)	−0.06 (0.08)
Age	0.01 (0.02)	−0.01 (0.02)	−0.01 (0.02)
Orphanhood (ref = non-orphan)			
Single orphan	0.33 (0.15)*	0.16 (0.11)	0.26 (0.13)
Double orphan	0.30 (0.18)	0.21 (0.13)	0.30 (0.16)
Parental care (ref = both parents)			
Single parent	−0.08 (0.20)	−0.03 (0.12)	−0.21 (0.16)
Neither parent	−0.19 (0.21)	−0.06 (0.13)	−0.28 (0.17)
Days since reunification	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Years in RCI	−0.01 (0.01)	−0.02 (0.01)**	−0.03 (0.01)**
Has disability	−0.31 (0.11)**	−0.23 (0.08)**	−0.42 (0.12)**
Household hunger	−0.01 (0.03)	−0.11 (0.03)***	−0.03 (0.03)
N	105	105	105
R^2	0.198	0.265	0.263
F	1.72	5.57***	4.06***

Note: Statistically significant at * $p < .05$, ** $p < .01$, *** $p < .001$.

First, perhaps children who had functional difficulties both while in the RCI and after leaving the RCI had been receiving better support and accommodation in the RCI than in their families. This is plausible because prior literature has found that children can enter residential care due to the stigma of having a disability or in order to access a more accommodating environment (Berens & Nelson, 2015; Rodríguez et al., 2018), or can develop emotional and cognitive difficulties as a result of living in residential care (Berens & Nelson, 2015; Dozier et al., 2012; van IJzendoorn et al., 2020). However, there is scant information on the quality of care that children with disabilities receive in residential care or after reunification in Kenya, and whether either environment is more or less accommodating, though Disability Rights International suggests that ableism is rampant in both residential and family settings (Rodríguez et al., 2018).

A second possible explanation is that children who had relatively negative experiences of reunification, or who were happier with life in their RCI than in their family, developed disabilities, perhaps related to internalizing or externalizing difficulties, as a result of this negative reunification experience. Indeed, as many of the children in this study reunified unexpectedly and hastily due to COVID-19, it is possible that reunification itself was traumatic and caused behavioral or emotional difficulties. Studies have raised concerns about the well-being of children around the globe who were rapidly reunified by government entities due to COVID-19 without adequate planning and preparation (Howard et al., 2022; Wilke et al., 2020). It is well-established that trauma can cause functional difficulties, which can be disabling (La Greca et al., 2008; Schüssler-Fiorenza Rose et al., 2014); negative reunification experiences could have been experienced as traumatic by children, led to depression or anxiety, and in social environments that did not accommodate these emotional problems, led to disability.

Our study also found that other child characteristics and experiences were associated with subjective well-being. First, spending more time in residential care was associated with worse outcomes on basic needs and leisure and freedom. Although relatively large amount of research has linked duration of stay in RCIs with developmental delays in very young children, this data is often complicated by the effect of how old children were at entrance to residential care (van IJzendoorn et al., 2020), and little comparable research has examined how duration of stay in RCIs affects child outcomes. It deserves further investigation why basic needs and leisure and freedom were the only two outcomes linked to the length of time children spent in residential care, given that duration of stay was not correlated with household hunger or life satisfaction measures. One possible explanation is that children who had lived in residential care for longer periods were more accustomed to having more material resources in residential care, and were less satisfied with their material resources after reunification as a result. This is reinforced by qualitative and quantitative studies that have found that children in Kenya and other Sub-Saharan African countries often enjoy better material well-being in residential care (Embleton et al., 2014; James et al., 2017; James & Roby, 2019; Johnson & Vindrola-Padros, 2014; Ucembe, 2013) and report sometimes struggling with poverty after family reunification (Frimpong-Manso, 2018; Mahuntse, 2015; Walakira et al., 2022). In terms of leisure and freedom, prior literature has found that children in Kenya often enjoy greater freedom after reunification and dislike the rigidity of residential care (Gayapersad et al., 2019; Ucembe, 2013). One reason that our study found that more time in residential care was associated with lower leisure and freedom scores could be that children whose stays in residential care were shorter had been less accustomed to the rigidity of residential care, and thus more satisfied with freedom after returning to family life.

Children who had been orphaned by the death of one or both parents also had a greater increase in life satisfaction after reunification compared to non-orphans, even controlling for variables including household hunger and whether they lived with their parents. This finding appears to be in opposition to literature showing that children in Sub-Saharan Africa who have lost one or both parents could be at risk of mental health problems (Atwine et al., 2005; Cluver & Gardner, 2007; Puffer et al., 2012; Thurman et al., 2015). However, many such studies focus specifically on children orphaned by the death of one or both parents who are also affected by HIV/AIDS and who had not necessarily ever lived in residential care. One possible explanation is that children who had lost one or both parents regained a sense of belonging once reunified with extended family, and thus had increased life satisfaction after reunification. It is also possible that the children with living parents had originally entered residential care due to reasons more closely tied to family dysfunction, and thus were less happy with being reunified with them. Additional research is necessary to examine these possibilities and determine how parental death may play a different role in outcomes for children reunified from residential care.

We found one sex difference in our models: girls had greater decreases in life satisfaction from residential care to reunification than boys did. It is unclear why this is the case, since no study variables differed by child sex in bivariate analyses, and no other models had sex differences. We further investigated the relationship between sex and disability status in a post-hoc analysis, and found that the average change in life satisfaction amongst boys without disabilities was positive, while it was negative for girls with disabilities, girls without disabilities, and boys with disabilities. Some researchers suggest gendered phenomena may drive girls to enter institutions, such as escaping early marriage and female genital mutilation (Chege & Ucembe, 2020), so one possibility is that girls fear these situations after reunification.

Our analyses did not find significant differences in well-being outcomes for children based on child age, time since reunification, or parental care status. However, we caution against concluding that children's well-being does not differ based on the type of family relationship they have with the caregiver with whom they reunify. Our study included children who had reunified with single parents, two parents, grandparents, aunts and uncles, and other kin, but it is likely that our sample size was too small to detect differences between all of these groups. Previous research on the sub-continent has found that within family-based care, child outcomes can differ by type of relation between the child and caregiver (Beegle et al., 2010; Nduwimana et al., 2017; Neville et al., 2022), and more research is necessary to determine how this plays out in the context of reunification from residential care.

4.1. Limitations

There are several limitations of this study. Importantly, data were collected during a time of year when many children were at boarding schools, resulting in a diminished response rate. This factor could have introduced bias to the sample, as children who attend boarding schools could systematically differ from those who live at home and were available to be surveyed. In addition, although we aimed to keep the child survey extremely simple and accessible for a range of respondents by having visual aids and limited response categories, there were at least two children (and potentially up to four) who did not complete surveys because their disabilities precluded them from answering the survey questions; it is unclear if additional enumerator training or survey adaptation would have enabled their participation. As a cross-sectional study, this survey could not ascertain at what point children had begun to experience functional difficulties (i.e., before entering the RCI, as a result of living in the RCI, or upon reunification), limiting our ability to conduct further analyses to untangle why there were differences in well-being between children with and without disabilities. Although survey enumerators were trained to speak to children out of earshot of other adults, and it was explained in the assent process that their responses would not affect the support they received from CTWWC, child respondents may not have answered survey questions honestly if they felt nervous, that it would reflect badly on their caregivers, or if they believed the enumerators were associated with the residential care institutions. Our sample was also relatively small, so we had limited power to detect effects, especially in multivariate analyses; despite this, disability status remained a significant predictor of well-being, even in relatively low-powered multivariate analyses. Another limitation is that the CFM, the measure we used to assess functional difficulties, is not designed to distinguish between different types of disabilities (for example, physical, cognitive, and sensory, disabilities), so we were unable to examine if children with different types of disabilities had different outcomes; having data disaggregated by disability type may have allowed us to further investigate the causal mechanisms behind our findings. Also, we selected the Household Hunger Scale as a simple and straightforward proxy for economic deprivation, but family poverty would have been more robustly measured with, for example, the Demographic Household Surveys' wealth index methodology (Rutstein & Johnson, 2004). Finally, although this study provides valuable insights into child characteristics that may be linked with well-being amongst reunified children, there was no comparison group or wider sampling strategy that would allow for the results of this study to be generalized to children living in other settings or reunified children outside of this initiative, or to make comparisons between reunified children and other types of children. This study can only be considered a first step into the world of disability, residential care, and reunification scholarship, and our findings only signal the vast amount of research that still must be undertaken in this area.

4.2. Conclusions

This study found that children's life satisfaction before and after reunification was mixed, with nearly equal proportions of children preferring life in residential care and life with their families. There were important differences in well-being in subgroups of children, suggesting that practitioners must take care to ensure certain populations of children are not left behind in family reunification efforts. The most notable of these is children with disabilities, while other populations that may deserve further attention include girls, non-orphans, and children with the longest stays in residential care.

Practitioners must pay close attention to children with disabilities during the reunification process to ensure their well-being is not neglected, given that in our study children with disabilities preferred life in residential care to life after reunification. Social workers and case managers must conduct careful assessments of children before reunification and create plans for how children's needs will be at minimum met equally well after they transition to their families. For example, if children require specific healthcare, rehabilitative services, and inclusive education and training, a plan could be made for the residential care institution to continue providing these services in the child's home or as a day center after reunification. If distance makes this impossible, case managers should identify appropriate services in the family's vicinity well before reunification takes place. Plans should also be made to transfer adaptive equipment to the home or modify the family's home to be accessible. Caregiver and community attitudes towards disability are equally important to consider. Trauma-informed parenting education can help caregivers better understand and respond to children's emotional and behavioral difficulties, while advocacy campaigns can work to reduce stigma and discrimination, especially if they engage churches, mosques, village elders, and community and local government leaders.

More specific practice recommendations for children with disabilities must be informed by additional research. Despite many years of practitioners and advocates calling attention to the issues faced by children with disabilities in residential care (Rodríguez et al., 2018; Sherr et al., 2017; United Nations General Assembly, 2006), a dishearteningly small amount of research has analyzed how residential care and disability are intertwined in Sub-Saharan Africa to date. Rigorous, longitudinal research is necessary to elucidate the impacts of residential care and family reunification on children with disabilities, their well-being outcomes, and to describe the range and quality of services and barriers to service access that children with disabilities experience in various care settings, especially their families. Researchers and practitioners alike must assure that children with disabilities are not left behind.

In terms of other groups, girls and non-orphans also had poorer comparative life satisfaction after reunification, while children with the longest stays in residential care were less content with basic needs and leisure and freedom after reunification than their peers with shorter stays. These findings underscore the importance of gender-sensitive programming that work to ensure girls are fairly treated in their families and communities once they have left residential care. For example, evidence-based girls' empowerment interventions could be leveraged that have been shown to enhance Kenyan girls' social support, progress in school, confidence, and autonomy (Kemigisha et al., 2025). For non-orphans, if our hypothesis is true that these children are more impacted by family dysfunction, then practitioners should consider targeting this group with more intensive parenting education, taking care to ensure that their family dynamics are well-assessed prior to reunification. Finally, children who lived in residential care for longer times may need additional preparation or more gradual transitions in order to reintegrate into family life, given the hypotheses we suggested prior. These children could also benefit from maintaining ties with residential care peers or staff; for example, mobile messaging groups that facilitate communication with friends undergoing the same transitions could make the process of reintegration less stressful.

It is also important to further understand the subjective well-being of all children in residential care, especially during this period of greater efforts to reform policies governing children's care and to ensure children have access to safe and nurturing family care. This study has highlighted the complexity of children's experiences of reunification and family care: indeed, respondents were about evenly split between those who were happier in the RCI and those who were happier after reunification. Research must inform policy and practice decisions on how to support children and families to reunify from residential care and how best to build the strengths in families who are at risk of separation. It is imperative that the findings of this study are unpacked by future research so that there is a clearer understanding of the roles that time in residential care, sex, and orphanhood might play in child well-being outcomes, and that children's own perspectives are centered in such research.

CRediT authorship contribution statement

Sarah Elizabeth Neville: Writing – review & editing, Writing – original draft, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **Joanna Wakia:** Writing – review & editing, Supervision, Methodology, Conceptualization. **John Hembling:** Writing – review & editing, Supervision, Project administration, Methodology. **Beth Bradford:** Writing – review & editing, Supervision, Funding acquisition. **Martin Kiandiko:** Investigation. **Michael Ochieng:** Investigation. **Edith Apiyo:** Investigation. **Khadija Karama:** Investigation. **Alividzah Kituku:** Investigation. **Maureen Obuya:** Investigation. **Missie Oindo:** Investigation. **Wilson Ochuka:** Investigation. **Indrani Saran:** Writing – review & editing, Supervision, Formal analysis. **Margaret Lombe:** Writing – review & editing, Supervision. **Thomas M. Crea:** Writing – review & editing, Supervision, Methodology, Conceptualization.

Data availability statement

The data that support the findings of this study are openly available in the USAID Development Data Library at https://data.usaid.gov/Social-Services/Changing-the-Way-We-Care-Household-Survey-in-Kenya/ayyc-vukp.

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