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Foster home integration as a temporal indicator of relational well-being

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Abstract

This study sought to identify factors that contribute to the relational well-being of youth in substitute care. Using data from the [BLIND] study, youth responded to a 9-item measure of positive home integration, a scale designed to assess the relational experiences of youth to their caregivers and their integration into the foster home. Data were collected from youth in six month intervals, for an 18-month period of time. Latent growth curve modeling procedures were employed to determine if child, family, and case characteristics influenced youth's home integration trajectories. Results suggest stability in youth reports of home integration over time; however, children who were older at the time of study enrollment and youth who experienced placement changes during the period of observation experienced decreased home integration during the 18-month period. Results suggest youth's perspectives of home integration may in part be a function of the child's developmental stage and their experiences with foster care placement instability. Implications for practice and future research are discussed.

Keywords

Foster care; adjustment; integration; assessment; well-being

1. Introduction

Family relationships provide a critical context for child development (Bronfenbrenner, 1986), and healthy family bonds are particularly important to the psychosocial well-being of children who've experienced maltreatment and placement into substitute care (Schofield,

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2002; Schofield & Beek, 2005). Placement into foster care requires children to not only make sense of their previous maltreatment experiences, but also necessitates their adjustment to changes to their social environment including adaptation and integration into a new family system (Heptinstall, Bopal, & Brannen, 2001; Johnson, Yoken, & Voss, 1995). Separation from caregivers and siblings during critical developmental years has the potential to disrupt family bonds, relational continuity, and attachment formation (Authors, 2014b; Authors, 2017b; Committee on Early Childhood, Adoption, and Dependent Care, 2000; Herrick & Piccus, 2005; Perry, 2006) and can lead youth to feelings of emotional distress including grief, loss, and sadness (Bruskas, 2008; Herrick & Piccus, 2005; Lundstrom & Sallnas, 2012).

A considerable number of youth move through the U.S. foster care system each year. In 2015 a reported 427,910 youth spent time in care, with an average length of stay of 20.4 months (AFCARS, 2016). Statewide audits of child welfare systems suggest that nationwide, only 43.6% of youth in care achieve permanency within 12–23 months of removal and on average children experience approximately 4 moves per 1,000 days spent in foster care (USDHHS, 2015). It is estimated that in any given year, between 22–70% of foster care placements will disrupt (Blakey, et. al., 2012), requiring children to re-adjust and integrate into new foster family systems.

Recognition of the risks associated with placement into care have led to a renewed focus on the developmental implications of foster care (Zeanah, Shaffer, & Dozier, 2012) and the importance of healthy foster family relationships to the well-being of youth in substitute care (Williams-Mbengue, 2016). As such, understanding youth experiences and identifying the conditions which promote healthy foster family relationships over time may prove beneficial to researchers and practitioners who are interested in assessing and promoting the relational well-being of youth in substitute care.

This study sought to identify factors which contribute to a foster youth's positive home integration into a family foster home over an 18-month period of time. We define positive home integration using a 9-item measure (Authors, 2016a) which asks youth to report the extent to which children feel included in their foster family (e.g., the extent to which they feel treated with kindness, the extent to which they feel treated with respect, the extent of their involvement in family decision making, how good their relationship is with their foster parent, how well they get along with their foster parent, how well the foster parent listens to the youth, how responsive the foster parent is to their needs, how well the foster parent responds when the child has a specific problem). We begin our investigation with a review of research focused on the relational well-being of youth in substitute care, and follow with a secondary analysis of longitudinal data from the [BLIND] study (Authors, 2014a; Authors, 2017a), a randomized controlled intervention trial designed to strengthen sibling relationships for youth in foster care. Using the 9-item youth reported measure of positive home integration (Authors, 2016a), we assess youth reports at four six-month intervals, for an 18-month period of time. Child, family, and case characteristics are examined in relationship to youth reported positive home integration trajectories to identify factors that contribute to a youth's positive integration into a foster family home over time. Following a

report of findings and discussion of results, we propose areas for future research and practice focused on the relational well-being of youth in substitute care.

2. Literature Review

How youth experience placement into care and the relationships they form with their foster families have been the focus of a limited number of empirical studies. Given that youth are the primary recipients of child welfare services, these investigations however provide valuable insights into the relational processes occurring within family systems that promote a child's successful integration into a foster family system, and illustrate the temporal nature of relational well-being for youth in substitute care.

2.1. Operationalizing Relational Well-Being in Foster Family Settings

Relational well-being in foster family settings have been operationalized a number of ways, including foster home adjustment (Affronti, Rittner, & Semanchin-Jones, 2015), foster home adaptation (Dunn, Culhane, & Taussig, 2010; Semanchin-Jones, Rittner, & Affronti, 2016), foster home integration (Leathers, 2002; 2006), positive home integration (Authors, 2016a), and child-caregiver therapeutic alliance (Rauktis, De Andrade, Doucette, McDonough, & Reinhart, 2005). These characterizations illuminate the processes occurring within foster family systems that promote successful adjustment and adaptation (Affronti, Rittner, and Semanchin-Jones, 2015; Semanchin-Jones, Rittner, & Affronti, 2016), identify factors which contribute to the development of therapeutic alliance between children and their caregivers (Rauktis, et. al., 2005), and examine associations between youth-foster family relationships and other important dimensions of child welfare practice including child behavior (Leathers, 2002; Leathers, Spielfogel, Gleeson, & Rolock, 2012) placement stability (Authors, 2016b; Leathers, 2006) and permanency (e.g., adoption) (Leathers, Spielfogel, Gleeson, & Rolock, 2012).

There is presently no unifying framework for operationalizing relational well-being in foster family systems, however Morissette (1994) provides a useful approach for thinking about foster family relationships as a series of processes which unfold in developmental stages. While the framework focuses primarily on foster parent relationships to child welfare agencies and includes foster parent-agency specific developmental considerations (e.g., foster parent pre-contact preparation, collegial relationships with the agency following successful navigation of foster parenting responsibilities), relationships between youth and foster parents are described and key distinctions are made between a youth's initial adjustment to foster care and their successful integration into a foster family system. Morissette proposes a child's initial placement into a new family home (defined as "contact") as a time characterized by negotiating boundaries, learning the household rules, and gaining familiarity with caregiver expectations. During this stage youth may push boundaries and display behaviors that test the skills of their foster parents. If the youth and their foster families successfully negotiate the challenges associated with the contact stage, the foster care placement transitions into a developmental stage characterized by stability, predictability, and consistency (defined as "stabilization"). It is during the stabilization stage that family boundaries become established, interactions between caregivers and the child

become more consistent, and foster parents become more autonomous in their parenting and decision making.

While not specified in Morissette's developmental framework, we would argue that the period of foster home stabilization is followed by youth's integration into the family system. Positive home integration would be characterized by mutual respect, kindness, and youth feelings of inclusion in the family.

2.2. Youth, Caregiver, and Professional Perspectives on Foster Family Relationships

Studies of foster family relationships from youth, caregiver, and professional perspectives highlight the difficulties associated with youth's adjustment to foster care and the importance of inclusive family processes in promoting successful integration into foster family systems. Dunn, Culhane, and Taussig (2010) asked 180 9–11 year old youth to respond to open ended questions about the hardest and most helpful aspects of placement into out of home care. Youth reported that adapting/transitioning to a new environment and missing their family were the most difficult aspects of foster care placement, and children's appraisals did not differ based on the type of maltreatment they experienced or their length of time in care. Children who rated strong attachments to their foster caregivers however were more likely to report that things would have been worse if they remained in their home of origin than did children with weak attachments to their foster caregivers.

In a study with former youth in care, Affronti, Rittner, and Semanchin-Jones (2015) conducted semi-structured interviews with 18 foster care alumni to explore their perspectives on what influenced their adjustment to foster care. Nine themes emerged from the interviews and highlighted a number importance considerations related to how foster caregivers welcome youth into the family system and structure their interactions to promote a successful adjustment to the foster care placement. Youth reported that "good" foster parents demonstrated a sustained commitment to the child and enduring interest in the parent-child relationship. Family members used language which gave the youth a sense of ownership (e.g., your room, our house) and inclusion (e.g., my daughter vs. foster daughter) in the family system. Consistency and predictability of rules, even when restrictive, helped promote youth's successful adaptation to the foster care placement. Youth reported that good foster parents individualized their interactions with the child and respectfully navigated competing loyalties to the birth family. A number of youth also spoke to the importance of siblings; specifically that sibling co-placement provided a level continuity and connection during the foster care placement process. This is consistent with a growing body of research suggesting the presence of siblings in the same foster home is beneficial to youth's emotional well-being and to the stability of their foster care placements (Authors, 2014b; Authors, 2016b; Authors, 2017b; Herrick & Piccus, 2005).

The role of family expectations and rules within the foster home have been identified by youth as important to their feelings of inclusion in the family system. Rauktis, Fusco, Cahalane, Kierston Bennet, & Reinhart (2011) employed focus groups with 40 youth who spent time in out of home care to understand how youth perceived the restrictiveness of their foster home placements, and found that youth reported rules in foster homes differed considerably from non-foster home settings and from other children in the home who were

not foster children. Youth perceived foster home restrictiveness as inconsistent and arbitrary rules, with non-individualized expectations from their foster caregivers that were developmentally inappropriate (e.g., not being allowed to have a cell phone or ride in car with friends). Youth who experienced high levels of restrictiveness in the home settings felt angry, resentful, and stigmatized by unrealistic family expectations and agency policies governing the parenting of children in foster care.

Research with foster caregivers suggest similar perspectives to youth regarding the importance of family relationships, and highlight the temporal nature of foster youth adjustment and successful foster home integration. Semanchin Jones, Rittner, & Affronti (2016) conducted semi-structured interviews and focus groups with 35 experienced foster parents to explore the strategies caregivers used to help children adapt to their placement into care. The authors found that a youth's transition into care involved youth experiencing a "settling-in" period, and how long it took a youth to feel integrated into the family varied according to the child's previous family and foster care experiences. Foster parent behaviors such as personalizing the child's room, preparing and sharing meals, and family members responding appropriately to the child's behavior challenges helped promote youth's successful adaptation to the placement. Using inclusive family language and involvement in family activities were also seen as important to sustaining relationships and helping youth feel integrated into the foster family system.

Caregiver perspectives of family relationships suggest processes related to youth's home integration also appear to influence the success and stability of a youths foster care placement. Brown & Campbell (2007) interviewed 61 foster parents to ask what they think contributes to a stable placement, and caregivers reported themes consistent with positive integration into the family system; caregivers reported that good relationships, family connections, children's personal growth, and positive family change helped promote a successful foster care placement. Conversely, Brown & Bednar (2006) found that certain relational processes contribute to caregiver's desire to end a placement. Specifically, caregivers reported that children's unsuccessful adaptation to the family contributed to a caregivers desire to end the foster care placement and ultimately their decision to have the child removed from their home.

Foster family relationships are important not only during the placement period, but also but also during youth's transition from foster care. Geenen & Powers (2007) employed focus groups with 88 individuals (foster youth, caregivers, caseworkers, teachers, independent living staff, and other key professionals) to understand the transition experiences and needs of youth in care. In this study youth reported frustration with the inability to practice skills that are critical to the transition to adulthood, and feeling as though they had little say in their important decisions that impacted their lives. Respondents across groups stressed the importance of relationships; caring, long-term commitments were viewed as critical to a youth's successful transition to adulthood. These relationships were viewed by youth as more important than formal services, particularly because these relationships held the potential to endure beyond the time a youth could formally access services from the child welfare system. Caring, committed relationships provided continuity, supported youth's

sense of self-worth, and provided a context for continued developmental opportunities as the youth aged out of foster care.

2.3. Multivariate Studies of Foster Family Relationships

Research specific to youth adaptation and foster home integration have been explored in a limited number of quantitative studies. Early research assessing youth relationships to foster families included work by Fanshel (1982), who developed a single item indicator which asked the caseworker to report on the children's perception of the foster home and their reaction to the possibility of being removed from their foster home. This item was designed to help caseworkers assess a child's foster home as a potential permanent placement if reunification with the family of origin was not possible. Leathers (2002) later modified this item by creating two questions which independently assessed caregiver and caseworker perceptions of (1) the child's perception of belonging the foster home, and (2) the child's possible reaction to being removed from the home. Leathers (2002) initially conceptualized this construct as a measure of *attachment*, and using a cross-sectional approach found children's attachment to the foster family was negatively associated with placement change. Leathers (2006) later re-conceptualized this two-item measure as *foster home integration* and examined whether foster home integration mediated the relationship between problem behaviors and the occurrence of placement disruption within five years. In this study foster home integration was found to mediate the association between problem behaviors and placement disruption; for every unit increase in foster home integration there was a 56% decrease in odds of youth experiencing a placement change.

At least two investigations have examined factors which contribute to foster family relationships over time. Leathers, Spielfogel, Gleeson, & Rolock (2012) employed a longitudinal design to examine the relationship between foster home integration, youth behavior problems, and the likelihood of adoption for a sample of 31 youth in treatment foster care. This study included youth who were between the ages of 4–12 at the time of enrollment and used the child's caseworker and foster parents as the reporting source for the home integration measure. The expanded foster home integration scale included 7 items designed to assess the frequency of child involvement in family activities, desire for inclusion in the family system, and closeness of the child to the foster parents extended family and other children in the home. In this study it was found that length of time in the foster home was associated higher levels of home integration, however externalizing child behavior problems was negatively associated with foster home integration over the four measurement intervals.

Raukits, De Andrade, Doucette, McDonough, & Reinhard (2005) utilized a repeated measures design to examine how youth and caregiver relationships develop within treatment foster care settings. Using a sample of 25 youth and 26 treatment foster parents, the authors utilized the Therapeutic Alliance Scale (Doucette & Bickman, 2001) to track changes in youth and caregiver ratings of therapeutic alliance over 5 to 6 measurement intervals. The Therapeutic Alliance Scale assessed two dimensions of the caregiver-child relationship; mutuality and empathic qualities of the parent-child relationship, as well as resistant and unfavorable outlook on therapy. In their analysis Rauktis, et. al. (2005) found a "honeymoon

effect” for therapeutic alliance; youth reported higher ratings of therapeutic alliance at the initiation of the placement, then a decrease in therapeutic alliance during the adjustment period, followed by an increase in therapeutic alliance after approximately 10 months in the home. Caregivers reported higher average ratings of therapeutic alliance than the youth, and interestingly the presence of caregivers biological children in the home contributed to more stable reports of therapeutic alliance over time. Therapeutic alliance trajectories differed for children whose ethnicity differed from their caregivers, and children with four or more prior placements had lower alliance scores than those with a more stable history of substitute care placements.

International research with youth in care have also explored the role of foster family relationships and the well-being of youth in care. Fuentes, Salas, Bernedo, & García-Martín (2014) utilized a cross-sectional design to examine the effects of foster parenting style on the problem behaviors of youth in care. Foster parents of 104 youth completed measures designed to assess their affect and communication style (e.g., warmth/communication, criticism/rejection), their approach to discipline (e.g., authoritative, authoritarian, permissive), and child’s internalizing and externalizing behaviors. The authors found a linear relationship between parenting style and child externalizing behaviors; caregivers who displayed greater warmth and communication and displayed an authoritative parenting style reported fewer externalizing child behavior problems than did caregivers who took an authoritarian approach to parenting and displayed criticism and rejection in their communication styles with children in their care.

2.4. Measuring and Assessing Foster Family Relationships

Aside from the foster home integration scale (Leathers, 2002; 2006; Leathers, Spielfogel, & Rolock, 2012) few brief assessment measures exist to specifically examine foster family relationships and youth’s home integration experiences. A lengthier measure called the Youth Connections Scale (Semanchin-Jones & Laliberte, 2013) was developed to assess the connectedness of youth to their out of home placement, and is used by the social worker to identify a youth’s social support networks, quantify the number of supportive relationships the youth has to adults, and assesses the quality of those relationships. The overall scale provides a measure of total connectedness as perceived by the youth’s social worker and was validated with a sample of 53 adolescents in care between the ages of 15–21. The youth connections scale was found to have good test-retest and concurrent validity with the Social Support Behaviors scale (Vaux, Riedel, & Stewart, 1987).

To the authors knowledge only one youth reported measure designed to assess children’s foster home integration has been empirically validated. The positive home integration (PHI) scale (Authors, 2016a) is a 9-item measure that asks youth to rate the quality of relationships to their primary foster caregiver and the extent to which they feel integrated into the foster family home. This youth-reported measure taps multiple dimensions of foster family relationships identified in previous research as important to a youth’s successful integration into foster family system. Items within the PHI are positively valued on a 10-point scale and ask youth to rate the extent to which they feel included in the family, the extent to which they are treated with kindness, the extent to which they are treated with respect, the extent of

their involvement in decision making, how good their relationship is with their foster parent, how well they get along with their foster parent, how well the foster parent listens to the youth, how responsive the foster parent is to their needs, how well the foster parent responds when the child has a specific problem. The PHI was validated with a sample of 328 youth in care (164 sibling dyads) and has demonstrated strong internal consistency at baseline (Older Sibling: $\mu=.87$, Younger Sibling $\mu=.84$) and again at six-months post-baseline (Older Sibling: $\mu=.91$, Younger Sibling: $\mu=.82$). The PHI also demonstrates good test-retest reliability (Older Sibling: $r=.52$, $p<.001$, Younger Sibling: $r=.46$, $p<.001$). In validation tests, the PHI scale was significantly correlated at baseline with established youth reported measures of well-being including the Children's Depression Inventory (Older Sibling: $r=-.41$, $p<.001$, $n=159$, Younger Sibling: $r=-.37$, $p<.01$, $n=159$), Child/Adolescent Report of Post-Traumatic Symptoms (Older Sibling: $r=-.21$, $p<.05$, $n=155$, Younger Sibling: $r=-.33$, $p<.001$, $n=157$), Beck's Hopelessness Scale (Older Sibling: $r=-.26$, $p<.01$, $n=156$, Younger Sibling: $r=-.32$, $p<.01$, $n=150$), Youth Self-Efficacy (Older Sibling: $r=.38$, $p<.001$, $n=156$, Younger Sibling: $r=.42$, $p<.001$, $n=152$), and Youth Quality of Life (Older Sibling: $r=.61$, $p<.001$, $n=159$, Younger Sibling: $r=.60$, $p<.001$, $n=158$) as well as caregiver reported measures including the Child Behavior Checklist externalizing subscale (Older Sibling: $r=-.24$, $p<.001$, $n=152$, Younger Sibling: $r=-.19$, $p<.05$, $n=154$) and Parent's Report of Post-Traumatic Symptoms (Older Sibling: $r=-.24$, $p<.01$, $n=152$). For a full review of the psychometric properties of the positive home integration scale, see Authors (2016a).

The available research on relational well-being for youth in foster care suggest inclusive family processes are important to youths successful adjustment and adaptation (Affront, Ritner, & Jones, 2015; Semanchin Jones, Rittner, & Affronti, 2016), and restrictive rules and policies can hamper developmental opportunities for older youth (Rauktis, et. al., 2011). Foster family relationships can serve as an important source of support as youth transition into adulthood (Geenen & Powers, 2007), and youth's successful adjustment and integration into a foster family may promote the stability of their placement (Brown & Campbell, 2007; Leathers, 2006). The presence of siblings and/or kin in the same home may be particularly protective to youth, promoting placement stability and relational well-being (Authors, 2014b; Authors; 2016b; Herrick & Piccus, 2005). Current research illustrates the temporal nature of foster family relationships and their influence on the relational well-being of youth in care (Morissette, 1994; Rauktis, et. al., 2005; Semanchin Jones, Rittner, & Affronti). While a few brief and reliable measures designed to assess the relational experiences of youth in care exist (Leathers, 2006; Semanchin-Jones & Laliberte, 2013) these measures focus primarily on caseworkers or caregiver perspectives. The positive home integration scale is a brief, psychometrically validated youth reported measure designed to tap multiple dimensions of the foster care experience from the youth perspective (Authors, 2016a), and may be useful to practitioners and researchers who work to promote the relational well-being of youth in care.

3. Study Purpose

The objective of this study was to examine how a youth's report of positive home integration changes over time, and to determine if child, family, and case characteristics explain growth trajectories for this construct. The research questions guiding this investigation were: Do

youth characteristics (i.e., age, race, gender, sibling dyad birth order, child behavior problems), family living composition (i.e., living apart from siblings in non-relative care, living apart from siblings in kinship care, living with siblings in non-relative care, living with siblings in kinship care), and case characteristics (i.e., prior foster care placements, placement changes during study participation, receipt of a 12 session sibling relationship enhancement intervention) explain growth trajectories for youth reports of positive home integration over an 18-month period of time?

4. Methods

4.1. [BLIND] Study

Data for this investigation were drawn from the [BLIND] study, a randomized controlled trial which tested a relationship enhancement intervention for sibling dyads in foster care (Authors, 2014a; Authors, 2017a). The [BLIND] study was conducted with 328 pre-adolescent and adolescent aged youth who were universally recruited from the foster care system in a large metropolitan region in the Pacific Northwest region of the United States. To be eligible for participation, siblings must have been between the ages of 7–15 at the time of study enrollment, in the legal custody of the child welfare agency, and reside within the tri-county metropolitan region in which the study was conducted. Youth were enrolled as dyadic pairs that were yoked and randomized to treatment or control conditions. Dyads in the treatment condition participated in a 12-session sibling relationship enhancement intervention while dyads in the control condition participated in services as usual (Authors, 2014a; Authors, 2017a). Data were collected from the youth, their sibling, caregivers, caseworkers, teachers, study assessors, and the state's child welfare and education administrative databases. Four waves of data were collected, with observations periods spaced six months apart over an 18-month period of time.

4.2 Participants

The current investigation included a subsample of 185 youth (56.9%) for whom four waves of complete positive home integration data were available for longitudinal analysis. The mean age of this sample of was 11.8 ($sd=1.9$) years old, with a slightly greater number of female (52.4%, $n=97$) and non-white (50.8%, $n=94$) participants. Nearly equal numbers of older (50.3%, $n=93$) than younger (49.7%, $n=91$) siblings were represented. A slightly greater number of children from the control condition (53%, $n=98$) were observed. Youth experienced an average of 4 ($sd=3.3$) placements prior to study entry, with an average of .58 ($sd=.88$) placement changes during study participation. Caregiver reported baseline *Child Behavior Checklist* (CBCL 6–18; Achenbach & Rescola, 2001) scores were 52.5 ($sd=32.83$). At baseline assessment children were either co-placed with their sibling in kinship care (41.1%, $n=67$), co-placed with their sibling in nonrelative care (40.6%, $n=76$), placed apart from their sibling in nonrelative care (20.5%, $n=38$) or placed apart from their sibling in kinship care (2.2%, $n=4$).

To ensure analysis of youth for whom complete PHI data were available were comparable to youth with missing data, a series of comparison tests were conducted between the study subsamples. Independent samples t-tests were conducted for youth age, child behavior

checklist scores, placements prior to study entry, and placement changes experienced during study participation. Chi-square tests were conducted for youth race, gender, older/younger sibling, parent study treatment condition, and family living composition. Youth with missing PHI data (43.6%, $n=143$) were comparable on all model covariates except these youth experienced a greater number of placement changes during study participation ($\bar{x}=1.1$, $sd=1.6$, $t(238) = 2.99$, $p<.01$) and differed on the proportion of youth residing in the four family living composition group categories ($\chi^2=8.9$, $p<.05$, $n=328$). At baseline assessment youth with missing PHI data were co-placed with their siblings in nonrelative care (32.9%, $n=46$), co-placed with their sibling in kinship care (32.5%, $n=47$), living apart from their sibling in nonrelative care (27.3%, $n=39$), and living apart from their sibling in kinship care (7.7%, $n=11$).

5. Measures

The current investigation utilized a selection of measures drawn from the [BLIND] study dataset to understand if child, family, or case characteristics influenced youth positive home integration trajectories over an 18-month period of time. A description of the measures used for this secondary investigation are detailed below.

5.1. Positive Home Integration

The dependent variable in this analysis is the youth report of positive home integration, a 9-item scale which captures the perceptions of youth and their relationships to their primary foster home caregiver and sense of integration into the foster home (Authors, 2016a). Items within the PHI are positively valued on a 10-point Likert scale, with higher values for the PHI suggesting more positive relationships to their foster caregivers and stronger feeling integration into the foster household. The PHI construct was measured at four equidistant intervals, spaced 6 months apart, over an 18-month period of time. For a full report on the psychometric properties of the scale see Authors (2016a).

5.2. Youth Age

Youth age was captured from the [BLIND] study database and recorded at the time of entry into the study as a continuous variable.

5.3. Youth Gender

Youth gender was captured at the time of entry into the study and collected via the [BLIND] study database. Gender was recorded as a binary variable and coded so that 1=male and 2=female.

5.4. Youth Race

Youth race was captured from the [BLIND] study database and originally coded as a categorical variable. Due to small cell sizes for non-white racial categories, the race variable was collapsed into a binary predictor and coded as 1=white and 2=nonwhite.

5.5. Older Sibling/Younger Sibling

To partition variance according to sibling dyad, an older/younger sibling binary variable was collected from the [BLIND] study data base and entered into the model. Older/younger sibling status was coded so that 1=older sibling and 2=younger sibling.

5.6. [BLIND] Study Treatment Condition

Treatment condition was randomly assigned to participating youth at the time of study enrollment. Siblings were yoked and randomly assigned to either the treatment or control condition as dyadic pairs. Treatment condition was recorded as a binary variable, and coded so that 0=control condition and 1=treatment condition.

5.7. Child Behavior Checklist

At baseline assessment the youth's primary caregiver completed the child behavior checklist (CBCL 6–18; Achenbach & Rescola, 2001) to rate the level of behavioral problems for the youth. This 113-item questionnaire asks caregivers to report on behaviors over the previous six months, and assesses nine dimensions of child behavior. Caregivers endorse child behaviors with response options that include 0=not true, 1=somewhat/sometimes true, and 3=very true. The CBCL contains two primary subscales; internalizing and externalizing behavior, as well as a total score. Higher scores indicate greater behavior problems. For this investigation CBCL total scores were entered as a continuous variable.

5.8. Pre-Study Placement Experiences

The number of foster care placements youth experienced prior to study entry was collected from the state's child welfare administrative database. This variable measures the total number of foster home placements a youth experienced between their initial entry into foster care and their enrollment in the [BLIND] study. The number of pre-study placement experiences was recorded as a continuous variable.

5.9. Placement Changes During Study

The number of placements experienced by the youth during study participation was collected by the [BLIND] study staff. Foster care placement changes occurring during study participation were recorded and summed at the end of the 18-month window of observation. Placement changes during study participation was recorded as a continuous variable.

5.10. Living Composition

Household living composition was recorded at study baseline and represents a distinct combination of kinship and sibling co-placement categories (Authors, 2016). Youth could reside in one of four potential living composition categories at the time of baseline assessment: Youth who were living apart from their siblings in non-relative foster care were coded as the referent category. Youth who lived with their siblings in nonrelative care were coded as 2. Youth who lived apart from their siblings in kinship care were coded as 3. Youth who lived with their sibling in nonrelative care were coded as 4.

5.11. Time

Youth were assessed at four six-month intervals over the 18-month window of study participation. Baseline assessments were conducted at study enrollment, term assessment at month six, follow-along 1 assessment at month twelve, and follow-along 2 assessment at month eighteen. Time variables for each measurement period were generated and coded so that Assessment 1=0, Assessment 2=1, Assessment 3=2, and Assessment 4=3.

6. Analytic Plan

6.1. Preliminary Analysis and Data Preparation

Prior to multivariate longitudinal modeling a series preliminary analysis were conducted. First, mean values for PHI were computed for each measurement interval and line graphs were plotted to visually inspect variance in youth reports of PHI for each model covariate. Next, the data set was prepared for growth curve analysis through conversion from wide to long form. Latent growth curve models were tested in Stata version 14.1, using the xtmixed command. Standard errors were computed using maximum likelihood estimation procedures.

6.2. Model Specification

Latent growth curve modeling provides a general framework for testing relationships among observed and latent variables over time. In this analysis, observed PHI variables are represented by the four waves of youth report of home integration Y. The latent variables for home integration are represented by the intercept η_1 , which is the sample mean value for PHI, and the slope η_2 , which is a measure of change for positive home integration over the four observation periods. Disturbance terms e were computed to provide a measure of error for the observed PHI values, as well as the latent intercept Ψ_{11} and slope Ψ_{12} . Covariance estimates Ψ_{21} were computed for the latent intercept and slope. Figure 1 represents the measurement model developed to test growth trajectories for the positive home integration construct.

6.3. Growth Curve Analysis

6.3.1. Model 1: Unconditional Means Model—An unconditional means model was tested to determine if systematic variance for the PHI construct was present in the data. This model estimates the grand mean for responses to PHI across all individuals and periods of observation, and is required to determine if further modeling is appropriate. In the unconditional means model the intercept and slope represent the value of the PHI construct when no predictors are present. When the intercept for the unconditional means model is statistically significant it is appropriate to test an unconditional growth model. The unconditional means model was estimated using maximum likelihood estimation procedures.

6.3.2. Model 2: Unconditional Growth Curve Model—After determining the intercept for the PHI construct was significant (suggesting systematic variance was present in the data), an unconditional growth model was tested. The unconditional growth model partitions variance in PHI scores according to individuals and time. In this model, the fixed

effects estimate computes the average intercept and average slope for the PHI construct when model covariates are equal to 0. The residual variance estimate summarizes the average spread for observed PHI values relative to the youth's true PHI trajectory. The unconditional growth curve model was estimated using maximum likelihood estimation procedures.

6.3.3. Model 3: Conditional Growth Curve Model—Following a test of the unconditional model a conditional growth curve model was calculated for the PHI construct with model covariates included in the analysis. The conditional growth curve model permits examination of the effects of child, family, and case characteristics on youth's PHI trajectories. Youth age, race, gender, older/younger sibling status, and child behavior checklist scores were entered as child covariates. Family household living composition at baseline assessment was included as family covariates, with sibling co-placement and kinship care specified as the referent category. [BLIND] study treatment condition, placements prior to study entry, and placements experienced during study participation were entered as case covariates. Coefficients and standard errors were computed for each model covariate along with random effects parameters for the overall model. The conditional growth curve model was estimated using maximum likelihood estimation procedures.

7. Results

7.1. Model 1: Unconditional (Empty) Model

The intercept for the unconditional means model was significant ($\tau_{ti}=8.58$, $SE=.06$, $p<.01$), suggesting systematic variation was present in youth reports of PHI over the 18-month window of observation. High pooled mean values for the PHI construct suggests that not accounting for child, family, case characteristics, or time, youth generally felt highly integrated into their foster care placement settings.

7.2. Model 2: Unconditional Growth Curve Model

The unconditional growth model intercept was significant ($\tau_{ti} 8.60$, $SE=.10$, $p<.01$), however the slope for PHI was not. This suggests that, not accounting for child, family, or case characteristics, there was stability in mean values for PHI across the four observation periods.

7.3. Model 3: Conditional Growth Curve Model

Covariates were added to the model to determine if child, family, and case characteristics influenced youth reports of positive home integration over the 18-month window of observation. The intercept was significant ($\tau_{ti}=9.66$, $SE=.92$, $p<.01$), and in this model youth age ($\beta_{ij}=-.11$, $SE=.04$, $p<.01$) and placement changes experienced during observation ($\beta_{ij}=-.18$, $SE=.07$, $p<.05$) were associated with decreased PHI trajectories. Interestingly, household living composition did not influence PHI trajectories, nor did prior placement experiences. Youth gender, race, older/younger sibling status, [BLIND] study treatment condition, and baseline child behavior checklist scores were not significantly associated with youth's positive home integration trajectories.

To ensure the non-findings for living composition were not a result of combining sibling co-placement and kinship status into a categorical predictor, a post-hoc analysis was conducted in which sibling co-placement and living in kinship care were each entered into the conditional growth curve model as binary independent variables. Neither baseline sibling co-placement ($\beta_{ij} = -.18$, $SE = .20$, $p = .37$) or placement in kinship care ($\beta_{ij} = .00$, $SE = .17$, $p = 1.00$) were associated with youth reports of positive home integration trajectories over the 18-month period of observation.

To more closely examine the non-findings for child behavior problems, a post-hoc analysis was conducted with the child behavior checklist internalizing and externalizing subscales. A conditional growth curve model was tested for each subscale. Caregiver reports of internalizing child behavior problems were not significant of PHI trajectories, however a small, trend level effect for externalizing child behaviors ($\beta_{ij} = -.01$, $SE = .01$, $p = .08$) was observed.

8. Discussion

Results of this study suggest that not accounting for child, family, or case characteristics, youth generally reported high levels of positive home integration and reports remained stable over the 18-month window of observation. This overarching finding is encouraging given the important role of foster families in the lives of children who've been exposed to maltreatment and placed into substitute care. Nevertheless, there was variability in youth's ratings; decreases in positive home integration were noted for older children; for every year increase in child age, positive home integration trajectories decreased by 11%. These downward trajectories for older children suggest additional efforts may be needed to make sure youth feel included and integrated into the foster family during a developmental stage in which youth are seeking increasing autonomy and independence. This would be consistent with prior research by which found youth who lived in restrictive settings and did not have the chance to engage in developmentally appropriate activities felt frustrated (Geenen & Powers, 2007), angry, resentful, and stigmatized (Rauktis, et. al., 2011) by their foster care experience. Child welfare agencies may want to ensure foster caregivers are provided with necessary information about child and adolescent development and concrete suggestions to make sure each youth in the home feels listened to and included in family and household activities (e.g., inclusive language use, suggestions on ways to allow youth to have autonomy—decorate their room, select after school activities of interest to them, etc.).

In this study child gender, race, sibling birth order, and child behavior problems were not significant predictors of youth's positive home integration trajectories, nor was receipt of a 12-session sibling relationship enhancement intervention. This suggests that with the exception of child age, positive home integration may not be dependent upon other youth characteristics. The lack of findings for child behavior problems is inconsistent with previous research (Leathers, 2006; Leathers, Spielfigel, & Rolock, 2012), however child externalizing behaviors trends towards statistical significance. This divergence with prior research may be a function differences in sample characteristics among studies of foster home integration (e.g., sample size, geographic location, higher or lower level of problem behavior) or perhaps a result study design (e.g., one reporting source for both child behavior

and home integration versus one reporting source for child behavior and another reporting source for positive home integration). The lack of findings for [BLIND] study treatment condition suggest receipt of a sibling relationship enhancement intervention does not independently affect youths positive home integration experiences. This may be a function of the positive home integration measures focus on child-caregiver and child-family relationships.

Interestingly, family living composition (e.g, the presence of siblings and kin in the home) did not influence home integration trajectories for this sample. Prior research with [BLIND] study youth identified a graded protective effect for family living composition and foster care placement stability (Authors, 2016b), and we expected to find co-placed siblings in both relative and non-relative homes reporting higher levels of positive home integration than siblings who were living apart in kinship or non-relative care. It is possible that given the PHI measures focus on understanding the child's relationship to their primary caregivers and feelings of integration into the household, it may be that the protective mechanisms within sibling relationships operate independently from child-caregiver interactions and their feelings of inclusion into the family home. It may also be possible the lack of significance for family living composition was a result of the relatively high average levels of home integration reported for the full sample, as well as small cell sizes for the kinship/apart living composition category. Future research should consider assessing both youth and caregiver perspectives to better understand the impact of foster family relationships on youth's positive home integration in in different types of family living composition arrangements over time.

Regarding case characteristics, for every placement change youth experienced during study participation an 18% decrease in positive home integration was observed. This suggests that movement between homes may impair children's ability to form meaningful relationships with their foster caregivers as well as negative impact their ability to integrate into foster family homes. In this study however, youth's prior experiences with placement instability did not influence their feelings of integration into the home they were residing in at the time of the assessment. This could suggest that a child's placement history, even one characterized by multiple placement changes, does not necessarily determine their ability to successfully and positively integrate into their current foster home. Prior research suggests longer lengths of time in the foster home is associated with increased home integration (Leathers, Spielfogel, & Rolock, 2012) and higher levels of integration is negatively associated with placement instability (Leathers, 2006). Had the authors of this study been able to determine youth's length of time in current home at each assessment, the effects of placement change on home integration may have been more pronounced. What this study does suggest is that placement changes during observation are negatively associated with positive home integration. Practitioners should consider the potential benefits of assessing youth's home integration as part of a comprehensive and well-rounded strategy to promote the stability of their foster care placements and the relational well-being of youth to their foster families.

9. Limitations

There are a number of important limitations to this study that should be noted. First, this study examined positive home integration reports for a sample of [BLIND] study youth for whom four complete waves of positive home integration data were available for longitudinal modeling. Latent growth curve modeling requires complete data be available for analysis, so participants who did not complete items within the PHI scale at one or more waves of observation were not included in this investigation. While subsamples were comparable on the majority of model covariates, youth with missing PHI scores experienced more placement changes during the period of observation than did the group with complete PHI data. Had the investigators been able to capture all four waves of PHI data for the full sample, the coefficient values for placement changes prior to study participation may have been more pronounced. Subsamples also differed in living composition groups; the proportion of youth who were co-placed with their siblings were smaller in the sample with missing data. It may be possible that due to these differences, the graded protective effects of family living composition found in prior research with this population (Authors, 2016b) could not be determined. Second, in this study the authors were unable to model some covariates that could be important to understanding the relational experiences of youth in their care settings over time. For example, we were unable to establish a reliable measure from of the length of time youth had resided in the home either at the time of study enrollment or at each subsequent wave from the state's child welfare administrative database. While modeling placements prior to study entry and during study participation provides some indication of youth's experiences in different foster family homes, it does not capture the duration of time spent living in a particular foster home and the influence of length of time home on youth's positive home integration reports. Also missing from the available data were other indicators of family dynamics and patterns of interaction. Future research on the relational well-being of youth in care should consider investigating how patterns of interaction (e.g., child, sibling, and caregiver behavior, communication patterns and style) using multiple reporting sources contributes to a youth's positive home integration over time. Third, this study is correlational in nature and does not allow for causal inference. As such, results should be interpreted as descriptive associations of child, family, and case characteristics to youth reported positive home integration trajectories. Finally, this study was conducted with a population of youth in care from one metropolitan region of the Pacific Northwest United States, and findings should not be generalized to the broader population of youth in the U.S. foster care system.

10. Conclusion

Child welfare practitioners would benefit from assessment tools designed to measure the relational well-being of youth over the course of their stay in care, and the positive home integration scale may be a brief and reliable way to estimate youth's foster home experiences from the youth's perspective. Systematic assessment of family relationships occurring at routine intervals during a youth's placement stay could help child welfare systems optimize the developmental potential of foster care and enhance the relational well-being of youth in care; by systematically assessing foster family relationships at routine intervals, practitioners may be better equipped to correct course in family systems where

relational problems are present and the stability of the placement is at risk. The positive home integration scale is one tool practitioners can use to understand youth experiences in their foster home.

Future research on the relational well-being of youth in care should consider the developmental nature of foster care and the temporal fluidity of foster family relationships over time. Children go through a period of adjustment and adaptation before stabilizing and integrating into their foster homes (Rauktis, et. al., 2005; Semanchin Jones, Rittner, & Affronti, 2016), and longitudinal research designs allow researchers to consider the effects of time while children and families navigate foster care specific developmental processes. In addition, the availability of youth, caregiver, and caseworker reported measures now allow the potential to employ multiple-method, multiple indicator measurement approaches (Chamberlain & Bank, 1989) to better illuminate family processes and patterns of interaction that promote the relational well-being of youth in substitute care.

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Highlights

- Youth reports of home integration were examined over an 18-month period.
- Home integration scores were relatively stable for the majority of the sample.
- Child gender, race, family living composition, or child behavior problems did not influence integration trajectories.
- Decreased integration was noted for older youth and youth experiencing placement instability.

Figure 1.
Latent Growth Curve Measurement Model

Table 1

Latent Growth Curve Model for Youth Foster Home Integration

	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>			
			β	z	p	C.I.
Mean Intercept $\hat{\alpha}_1$	8.58 (.06)	8.60 (.10)	9.66 (.92)	10.47	0.00	7.85 – 11.47
Intercept Variance $\hat{\Psi}_{11}$	.82 (.10)	1.74 (.28)	2.20 (.39)			1.56 – 3.11
Disturbance Variance $\widehat{\Theta\epsilon}$	1.21 (.06)	.87 (.06)	.86 (.07)			.74 – 1.01
Mean Slope $\hat{\alpha}_2$		-.01 (.04)	.003 (.05)	-.07	.95	-.09 – .09
Slope Variance $\hat{\Psi}_{22}$		.20 (.04)	.23 (.05)			.16 – .34
Intercept/Slope Covariance $\hat{\Psi}_{21}$		-.41 (.09)	-.56 (.12)			-.80 – -0.32
Age			-.11 (.05)	-2.31	.02	-.20 – -.02
Race			.15 (.16)	.98	.33	-.15 – .46
Gender			.14 (.16)	.89	.38	-.17 – .44
OS/YS			.13 (.18)	.73	.47	-.23 – .49
CBCL			-.00 (.00)	-1.34	.18	-.01 – .001
Treatment Condition			.01 (.15)	.04	.97	-.28 – .29
Prior Placements			.01 (.03)	.35	.73	-.04 – .06
Study Placements			-.18 (.07)	-2.57	.01	-.32 – -.04
Living Composition						
Non-Relative, Together			-.27 (.21)	-1.26	.21	-.67 – .15
Kin, Apart			-.56 (.55)	-1.02	.40	-1.64 – .51
Kin, Together			-.27 (.2)	-1.15	.25	-.72 – .19

Note: Numbers in parenthesis are standard errors of parameter estimates.