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Foster Youth and Social Support: The First RCT of Independent Living Services

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Abstract

Objective: Conduct secondary data analysis to evaluate the effectiveness of Massachusetts' Adolescent Outreach Program for Youths in Intensive Foster Care (Outreach) for increasing social support (SS) among enrolled youth. **Participants:** 194 youth in intensive foster care under the guardianship of the Massachusetts Department of Children and Families with a goal of independent living (IL) or long-term substitute care, and born between August 1985 and December 1990 (67% female, 66% White, 27% Hispanic) participated in the study between September 2004 and March 2009. **Method:** We hypothesized that Outreach compared to services as usual (SAU; control group) would increase participants' SS and that there would be racial/ethnic disparities in SS as a function of the Outreach. Treatment effects were tested using mixed-effect models. **Results:** Outreach did not increase foster youth's SS, compared to SAU. No racial/ethnic disparities in program effect were detected. **Discussion and Applications to Social Work:** Providers of IL services should reconsider how best to build and strengthen SS among the foster youth they serve.

Keywords

independent living, foster youth, aging out, randomized controlled trial, John Chafee Foster Care Independence Program, disparities

Introduction

Aging out occurs when youth legally emancipate from the child welfare system prior to or without ever being reunified with their birth family, prior to being adopted, or prior to achieving some other permanent placement such as a guardianship. The age of emancipation varies by state, but typically occurs between the ages of 18 and 22. During fiscal year 2012, 23,439 youth nationwide experienced the transition out of foster care because they were no longer eligible to receive services. This represents 10% of the overall child welfare population that exited care during this year (U.S. Department of Health & Human Services, 2013). An inauspicious portrait emerges for many of the youth who age out without a secure attachment to a caring adult and insufficient independent living skills (Keller et al., 2007). Poor outcomes often follow, including mental health problems, delinquency and violence, unplanned parenthood, unemployment, homelessness, and criminal justice involvement (Courtney et al., 2011b; Cunningham & Diversi, 2012; Scannapieco, Connell-Carrick, & Painter, 2007). In fact, the most statistically vulnerable youth in the United States today are foster youth who have aged out of the child welfare system (Muller-Ravett & Jacobs, 2012).

A Brief History of Independent Living Policy

Recognizing the difficulties faced by older youth in care and youth emancipating from foster care, Congress created the Independent Living Program (ILP; P.L. 99-272) in 1986 to assist certain older foster youth as they enter adulthood. Undergirding this law is the belief that to stem the negative outcomes youth who emancipate from foster care experience, they must develop the life skills needed to achieve self-sufficiency, which in turn should put them on the path to long-term success. Thirteen years later, in recognition that despite the creation of the ILP there was little improvement in outcomes among youth who age out of foster care and amidst the tumult created by the General Accounting Office (1999) report entitled "Effectiveness of Independent Living Services Unknown," the Foster Care Independence Act (FCIA; P.L. 106-169) was passed. FCIA amended Title IV-E of the Social Security Act, and created the John Chafee Foster Care Independence Program (CFCIP), giving states more funding and greater flexibility in providing support for foster youth making the transition to independent living. FCIA doubled the total annual funds

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available to states from $70 million to $140 million per year to use for preparing foster youth for independence, allows states to use up to 30% of program funds for room and board, enables states to provide assistance to 18- to 21-year-olds who have left foster care, and allows states to extend health insurance coverage under Medicaid to former foster children up to age 21 (Collins, 2001). Despite these enhancements and improvements, effectiveness of ILP has remained elusive. In 2006, the Cochrane Collaboration issued a review of ILPs for improving outcomes for young people leaving foster care that indicated, again, the effectiveness of such programs is unknown (Donkoh, Underhill, & Montgomery, 2006). The authors' review was severely limited by the lack of studies of rigorous methodological quality, specifically, those using experimental or quasi-experimental designs.

Social Support as Part of Independent Living

One development area that is often part of ILPs is assisting youth with either building social skills to improve the likelihood that they will have supportive adults in their lives and/or connecting them to program people, like Outreach workers, who may serve as mentors, and thus provide social support. The overall goal is to assist youth with developing a social support network, so that once they leave foster care, they can access this key coping mechanism when dealing with the stressors associated with aging out. Foster youth typically pass through the child welfare system without these support systems in place. Most individuals in the general population have families of origin that provide continuing support. Many also have access to neighborhood and community supports to ameliorate poor developmental outcomes (Collins, 2001). Foster youth who age out often have disrupted living situations and schooling, having been removed from their homes and typically experiencing frequent transfers between out-of-home care placements, as well as schools (Collins, 2001). Yet, social support is vital during times of stress and for overall health and well-being (e.g., Uchino, 2004). Resiliency research has consistently shown social support to be a critical protective factor for vulnerable populations, like foster youth (Baynard & Cantor, 2004; Bernard, 2004; Werner & Smith, 2001).

One of the earliest national studies of ILPs for youth in foster care identified and located 844 adolescents discharged from foster care between January 1987 and December 1988, and found that the majority of the youth interviewed were able to identify a helpful support network (Cook, 1994). Courtney, Piliavin, Grogan-Kaylor, and Nesmith (2001), in a study of 141 young adults who had aged out of the foster care system in Wisconsin, found using a standardized self-report measure that the young people reported high levels of perceived social support from friends, significant others, and foster families, but somewhat less support from their families of origin. Courtney and Dworsky (2006), in a study of 603 19-year-olds making the transition to adulthood from care in three Midwestern states, found using a standardized self-report measure that the youth received social support some or most of the time, with "affectionate support" and "positive social interaction" being more available than "emotional/informational support" or "tangible support." Daining and DePanfilis (2007) identified personal and interpersonal factors that contribute to resilience of young adults leaving out-of-home care. Among several factors, social support was identified as associated with greater resilience. The authors recommended that child welfare organizations make more concerted efforts to assist transitioning youth in identifying a support network before leaving care. Hass and Graydon (2009) surveyed 44 foster youth about sources of resiliency that helped them "beat the odds" and complete postsecondary education. Results showed that most youth reported a variety of protective factors, including social support, or having a "turnaround person," a supportive, caring adult outside their home or school. Of those youth reporting the presence of such "turnaround person," most identified a specific adult from church, school, employment, or social services, who served as a mentor. Collins, Spencer, and Ward (2010) utilized data collected from 96 former foster youth regarding support they received during their transition out of care. Sources of support identified included professionals, birth family, and mentors, and were associated with completing high school or a General Educational Development (GED) degree and current employment.

Studies of natural mentors among foster youth indicate the potentially protective nature of this form of social support. For example, Munson and McMillen (2009) found that having a natural mentor was associated with improved psychosocial outcomes, including fewer symptoms of depression, less perceived stress, and greater life satisfaction. A study conducted by Osterling and Hines (2006) which assessed a mentor program for foster youth, "Advocates to Successful Transitions to Independence," showed that mentored youth reported improved social and emotional outcomes, and that learning life skills with their mentors was more meaningful than the typical classroom-based experience. Ahrens, DuBois, Richardson, Fan, and Lozano (2008) and Greeson, Usher, and Grinstein-Weiss (2010) conducted secondary data analyses from a nationally representative, longitudinal data set to better understand the role of natural mentors in the lives of foster youth. Ahrens et al. (2008) found that mentored foster youth had better physical health, were less likely to report suicidal ideation or have received a sexually transmitted infection, and experienced decreased aggressive behaviors. Greeson et al. (2010) found that the roles fulfilled by natural mentors of "like a parent," "role model," and providing "guidance/advice" were significantly associated with having increased income expectations and asset ownership among both nonfoster and foster youth.

There are no studies known to the authors that have critically examined the role of social support among the racially and ethnically diverse pool of youth placed in foster care. Social support studies from the general population of youth indicate that minorities tend to be more likely to seek out support during times of stress, yet this association may depend on the context in which the stressful events is experienced. Chapman and Mullis (2000) found that in a study of racial differences in adolescent coping and self-esteem among 361 male and females, African American adolescents reported using

coping strategies, including relying on peers, more frequently than Caucasians. In another study of adolescents in the general population, levels and correlates of an array of support types (e.g., parental, peer, spiritual) among African American and Caucasian youth were examined in three contexts: adolescent pregnancy, first year of college, and adolescence and young adulthood (15- to29-year-olds; Maton et al., 1996). Depending upon the developmental context, adolescents of color were more likely to rely on different sources of support than their Caucasian counterparts. To that end, the authors found that the influence of this variability on psychosocial outcomes may differ as a function of the youth's racial/ethnic background. For example, among pregnant adolescents, levels of spiritual support were higher for African Americans than Caucasians, and peer support was positively related to well-being only for African Americans. Among first-year college students, parental support was more strongly related to institutional and goal commitment for African Americans than Caucasians (Maton et al., 1996).

In addition to studies of social support among the general population of youth, child welfare services research bears upon the current investigation. Fifteen years of this research has established that a gap exists between the need for and access to services for minority children and youth who are referred to the child welfare system due to allegations of maltreatment and also for those who are ultimately placed in out-of-home care (Garcia, Palinkas, Snowden, & Landsverk, 2013; Miller, Cahn, & Orellana, 2012). As such, the current study is exploratory in nature. We are unsure if the racial disparity present in delivery of child welfare services will hold up in the current investigation. Alternatively, will our findings mirror those of previous social support studies in the general population, some of which have shown African American youth tend to be more likely to endorse higher levels of social support as a coping mechanism, and others that have found differences in support sources depending on the context in which the stressful event is experienced?

A Relationship-Based Model of Independent Living Programming

ILPs can be diverse in form. However, in function, they all focus on enhancing the outcome areas where youth who age out of foster care, irrespective of their racial/ethnic background, are known to struggle: employment, housing, physical and mental health, substance abuse, and mentoring/connection to adults. Most use a classroom-based instructional model that concentrates on teaching youth discrete and concrete skills considered to be associated with self-sufficiency. However, the program that is the subject of this investigation, the Massachusetts Outreach Program for Youths in Intensive Foster Care (Outreach) provides a relationship-based model directed at the engagement of youth with their Outreach workers. Through individualized services provided by a worker in a mentorship role, the program aims to prepare youth for the multiple domains for which they will be responsible after leaving care. Program activities are described as both providing youth with a sense of support from their worker and providing them with skills and concrete capital. The following domains are addressed: educational achievement, development of life skills, development of permanent connections and support systems, employment readiness, participation in postsecondary education, financial assistance, attaining employment, housing, physical and mental health, substance abuse treatment, relationship-building through mentoring, and, for youth who have not yet achieved permanency by age 18, encouragement to remain in foster care after 18 (Courtney, Zinn, Johnson, & Malm, 2011a).

Foster Care Population in Massachusetts

The Massachusetts Department of Children and Families (DCF) is the state agency responsible for the foster care population. It operates through a division of the state into six regions, which vary in geographic area and roughly approximate the distribution of the population. The city of Boston and the immediately outlying areas constitute one region, while the western third of the state is another. The central area of the state is a region, and the eastern third of the state has three regions in addition to the Boston region. The state of Massachusetts had 10,661 individuals in foster care on December 31, 2006, including children and adults up to age 23. Of these individuals, 7,815 were in foster care placements and 2,313 were placed in group homes or residential care. Massachusetts is one of several states that allow youth to remain in care past the age of 18. The population of adults 18 and older in care in Massachusetts formed 13.7% of the total 10,661 individuals in care. Of all youth in care, 20.7% had a service plan goal of independent living (Courtney et al., 2011a).

Research Aims

Using data from the Multi-Site Evaluation of Foster Youth Programs (MEFYP), the first randomized controlled trial (RCT) of independent living programming for foster youth, we focus on the outcome of social support for the Outreach program. Employing mixed-effects models, which provide several statistical advantages over traditional repeated measures analysis of variance (ANOVA; Gueorguieva & Krystal, 2004), we model the effect of the Outreach program on social support among minority and nonminority foster youth as compared to the effect of intensive foster care services as usual, or the control group. This is the first study to examine potential racial and ethnic disparities in social support as a function of independent living programming within an RCT framework. Along these lines we have two aims:

- **Aim 1:** Evaluate the effectiveness of the Outreach program as compared to services as usual on the change in *social support* between baseline/pre- and follow-up time points.
- **Aim 2:** Examine potential racial/ethnic disparities in *social support* as a function of the Outreach program.

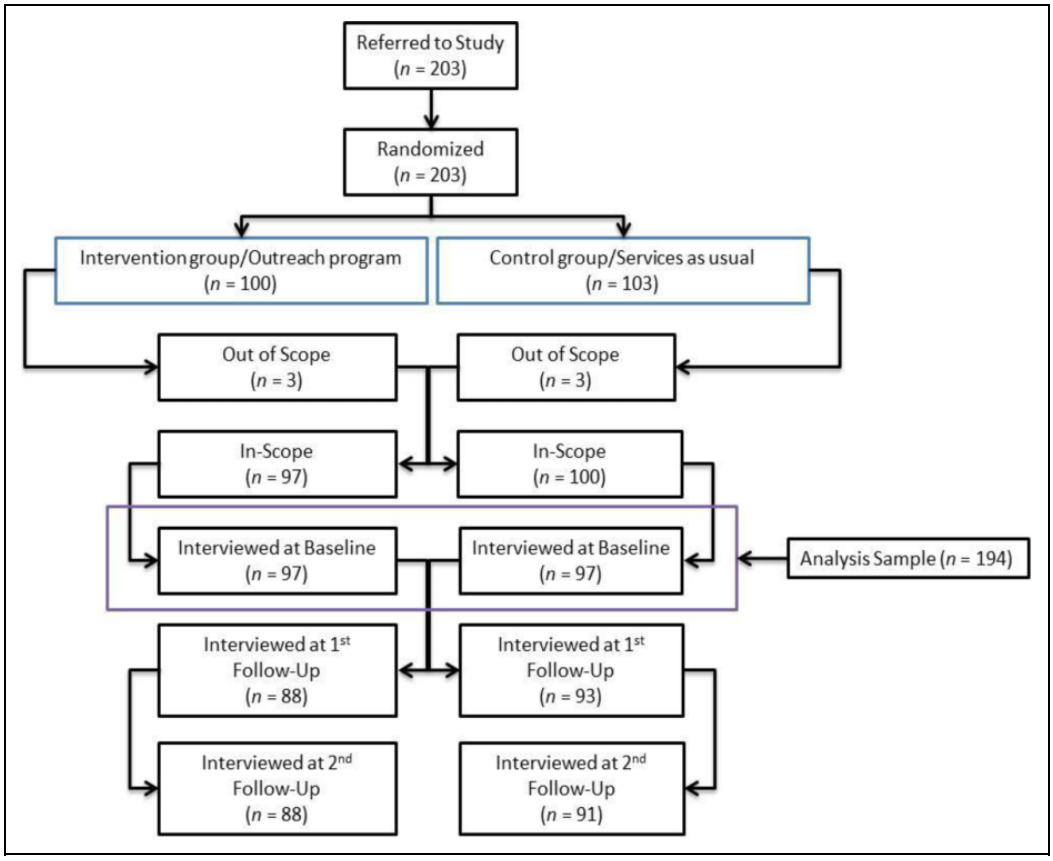

Figure 1. Participant flowchart.
Note: (1) Out of scope refers to runaway status ($n = 2$ intervention; $n = 2$ control), or reunited/legal guardian ($n = 1$ intervention; $n = 1$ control); (2) Noninterviews at baseline for the control group were due to (a) Youth refusal ($n = 2$), or (b) Gatekeeper refusal ($n = 1$); (3) Noninterviews at 1st follow-up were due to (a) Youth refusal ($n = 2$ control); (4) Noninterview at 2nd follow-up were due to (a) Youth refusal ($n = 3$ intervention; $n = 3$ control), (b) Runaway status and other nonlocatable ($n = 1$ intervention; $n = 1$ control), (c) Out of area ($n = 3$ intervention), (d) Incarcerated ($n = 1$ intervention, $n = 2$ control), or (e) Other ($n = 1$ intervention).

Method

Study Design

We conducted secondary data analysis using data from the MEFYP. The MEFYP employed a paired random assignment process, in which youth were randomly assigned either to the Outreach program (treatment group) or to a control group that received intensive foster care services as usual. Pairing prior to random assignment was necessary to limit possible effects on workers' caseloads from a series of control group assignments (Courtney et al., 2011a).

Comparison of baseline characteristics of Outreach and control group youth at the time of random assignment showed few significant differences. The Outreach group youth were more likely to have had prior placement in residential care and to have run away from home. One hundred and ninety-four baseline interviews were completed with nearly 98.5% of the in-scope sample. Of the 194 youth interviewed at baseline, 92% participated in the second follow-up interview. There were no control group youth who received Outreach services (Courtney et al., 2011a).

Procedure

Youth were considered eligible for the Multi-Site Evaluation if they were in intensive foster care, had a service plan goal of independent living or long-term substitute care, and were deemed appropriate for Outreach services by their DCF caseworker. When two youth in intensive foster care met these criteria and were referred to the Outreach program by their DCF workers, the referrals were sent to the Multi-Site Evaluation staff. Using a computer-generated random number, evaluation staff randomly assigned one member in each pair to the Outreach group and the control group. Interviewers who assessed outcomes were blind to the intervention status. Participants and their care providers were not. Youth were followed for 2 years. They were interviewed in-person at entry into the study (baseline) and once each year after that (Courtney et al., 2011a). Figure 1 is the participant flowchart for this RCT. The original target was to interview 250 youth at baseline; however, intake was halted in March 2007 with a total of 203 youth randomly assigned and 194 interviewed at baseline. Due to the theft of a laptop computer with identifying information about the study youth, a determination was made that it was best to halt further intake. During the course of the trial, no adverse

events were encountered, other than the potential violation of confidentiality resulting from the theft of the laptop. There is no record of such a violation.

Intervention

The Outreach program is a voluntary service that assists adolescent foster youth with preparing to live independently and achieve permanence after exiting state care. Youth are paired with an Outreach worker who works closely with them to achieve their goals. Services are based on a youth development model and individualized based on assessed need. Outreach workers help youth with a variety of tasks, including obtaining a driver's license, applying for college, and finding employment. Some of these services are referrals to other organizations, while some are provided directly by the Outreach worker. The direct assistance component is consistent with the program's broad goal of empowering youth to develop the skills of an independent adult. Other goals of the Outreach program include supporting participation in higher education, achieving permanency through a connection to a caring adult, and identifying a social support network for each youth (Courtney et al., 2011a).

The Outreach program uses a relationship-based model that emphasizes the power of a trusting connection between youth and their Outreach workers. Youth meet with their Outreach workers regularly, usually at least once/week during a period of active service provision, and then only intermittently during a follow-up "tracking" period. According to program data, youth in the study were enrolled in Outreach for an average of 22 months, or close to 2 years, including an average of 16 months of services followed by 6 months of tracking. The maximum caseload of an Outreach program worker is limited to 15 youth. Youth are referred to Outreach by their DCF worker when their permanency goal changes to independent living, which is used for youth who are unlikely to reunify with their families and are nearing the age of emancipation. Youth must be age 16 or older to be referred to the Outreach program (Courtney et al., 2011a).

Measure of Outcome Variable

We used seven social support variables (Courtney, Stagner, & Pergamit, 2001) to create a count variable by summing the numerical responses across them. Each social support item asked youth how many different people would perform certain tasks for them in specific types of situations. Items were not mutually exclusive, so a youth could count the same person for all of the items. An example item is "How many different people would lend you money in an emergency?" The new social support count variable ranged from 0 to 245, with a mean of 44.5 ($SD = 32.7$) at baseline. The α for the new social support scale was acceptable for all time points: .85 at baseline, .77 at first follow-up, and .71 at second follow-up.

Measures of Control and Independent Variables

Group assignment. Assignment to the treatment (Outreach program, $n = 97$) or control (SAU, $n = 97$) groups was designated with a 1 (*treatment*) or 0 (*control*).

Gender. Gender was designated as 0 (*female*) and 1 (*male*). Of the 130 females in the study, 64 (49.2%) received the Outreach program, while the remaining 66 females received SAU.

Race. White was coded as 0, while other racial groups, including African American, Asian, American Indian, Alaskan Natives, and Multiracial were collapsed into a category labeled Minority, which was coded as 1. Of the 65 participants in the Minority group, 27 (41.5%) received the Outreach program, while the remaining 38 individuals (58.5%) received SAU.

Ethnicity. Hispanic was coded as 1, and non-Hispanic was coded as 0. Of the 52 participants who identified as Hispanic, 21 (40.4%) received the Outreach program and 31 (59.6%) received SAU.

Age. Age at baseline was a continuous variable, ranging from 15 to 20 with a mean of 16.88 ($SD = .76$).

Analysis Plan

All statistics were performed using Stata version 12 StataCorp LP. (2011). Primary analyses of treatment effects were tested using mixed-effect models in which group assignment was treated as a between-subject factor and time was treated as a within-subject factor. Unlike traditional ANOVA approaches (e.g., repeated measure analysis of variance [ANOVA] or multivariate analysis of variance [MANOVA]), this analytic strategy does not assume that participants are measured on the same number of time points. Thus, if youth have missing data at one time point, the mixed model drops only that time point, retaining the remaining data, which is more consistent with Intent-to-Treat principles (Enders, 2010). Mixed-effect modeling also provides the advantage of accounting for dependence of observations, which is inherent to a repeated measures design and frequently violates one of the primary assumptions of traditional ANOVA approaches (Gueorguieva & Krystal, 2004; Singer & Willet, 2003).

Based on the Akaike information criterion (AIC) and the Bayesian Information criterion (BIC), we tested for a variety of residual variance–covariance structures, and decided to use unstructured residual variance–covariance, which had the best model fit, when estimating treatment effects. In the primary analysis, a significant Treatment $\times$ Time interaction effect indicates the effectiveness (or lack thereof) of the Outreach program, compared to SAU. In addition, we augmented the primary analysis model by including a three-way interaction of Treatment $\times$ Time $\times$ Race (or Ethnicity), to see if the treatment effect differed by race (or ethnicity).

Table 1. Mixed-Effect Model With Two-Way Interaction.

	Coefficient	*SE*	95% CI *L*	95% CI *U*
Treatment (ref = control)	−1.02	4.78	−10.40	8.35
Time (ref = Time 1)				
Time 2	−2.52	2.86	−8.12	3.08
Time 3	−10.67***	3.03	−16.60	−4.74
Treatment × Time				
Outreach × Time 2	−1.03	4.08	−9.03	6.97
Outreach × Time 3	1.67	4.29	−6.74	10.07
Race (ref = White)	−4.74	3.20	−11.00	1.53
Age at Time 1	−2.94	1.96	−6.77	0.90
Gender (ref = female)	13.34***	3.17	7.13	19.55
Constant	92.17**	33.19	27.13	157.21
AIC	4,990			
BIC	5,054			

Note. (*N* = 192), AIC = Akaike information criterion; BIC = Bayesian Information criterion; CI = confidence interval. Number of person year is 547.
*p < .05. **p < .01. ***p < .001.

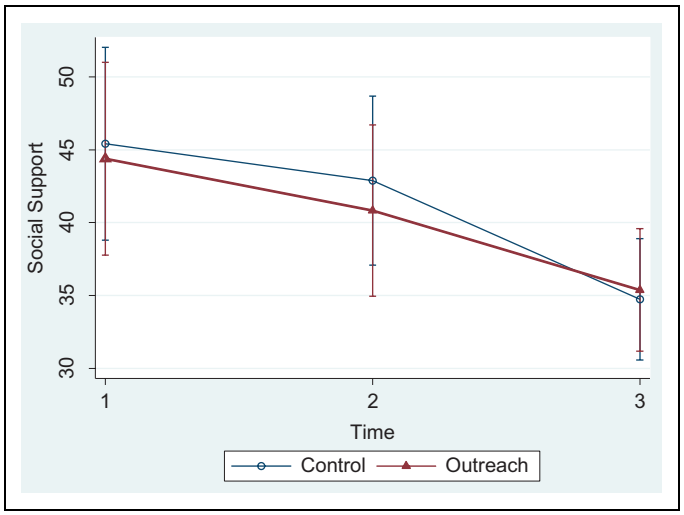

Figure 2. Adjusted predictions of social support with 95% confidence interval (CI).

Results

A repeated measures mixed model was conducted to assess the impact of the Outreach program on foster youth's level of social support, across three time periods (baseline, first follow-up, and second follow-up). There was no significant interaction between treatment type and time (Joint Test: $\chi^2 = .52$, $df = 2$, $p = .77$), suggesting no short- or long-term effect of the Outreach program (See Table 1 and Figure 2). There was a significant main effect for time (Joint Test: $\chi^2 = 23.63$ [$df = 2$], $p < .001$), suggesting a reduction in social support across the three time points. In particular, the difference in social support between baseline and the second follow-up was significant ($b = -10.67$, $p < .001$). The main effect comparing the Outreach and SAU was not significant ($b = 1.02$, $p = .83$), showing no difference in social support at baseline. Finally, there was no

Table 2. Mixed-Effect Model With Three–Way Interaction.

	Coefficient	*SE*	95% CI *L*	95% CI *U*
Treatment (ref = control)	0.28	5.88	−11.25	11.81
Time (ref = Time 1)				
Time 2	−1.54	3.68	−8.75	5.67
Time 3	−9.02*	3.88	−16.63	−1.42
Treatment × Time				
Outreach × Time 2	−0.84	5.03	−10.69	9.01
Outreach × Time 3	−1.14	5.26	−11.45	9.18
Treatment × Race				
Outreach × Minority	−3.75	10.29	−23.92	16.42
Time × Race				
Time 2 × Minority	−2.51	5.86	−13.99	8.97
Time 3 × Minority	−4.24	6.22	−16.44	7.95
Treatment × Time × Race				
Outreach × Time 2 × Minority	−1.66	8.77	−18.84	15.52
Outreach × Time 3 × Minority	8.89	9.29	−9.33	27.10
Race (ref = White)	−2.26	6.98	−15.94	11.41
Age at Time 1	−2.90	1.96	−6.74	0.95
Gender (ref = female)	13.35***	3.18	7.11	19.59
Constant	90.53**	33.35	25.17	155.89
AIC	4,970			
BIC	5,056			

Note. (*N* = 192) AIC = Akaike information criterion; BIC = Bayesian Information criterion; CI = confidence interval. Number of person year is 547.
*p < .05. **p < .01. ***p < .001.

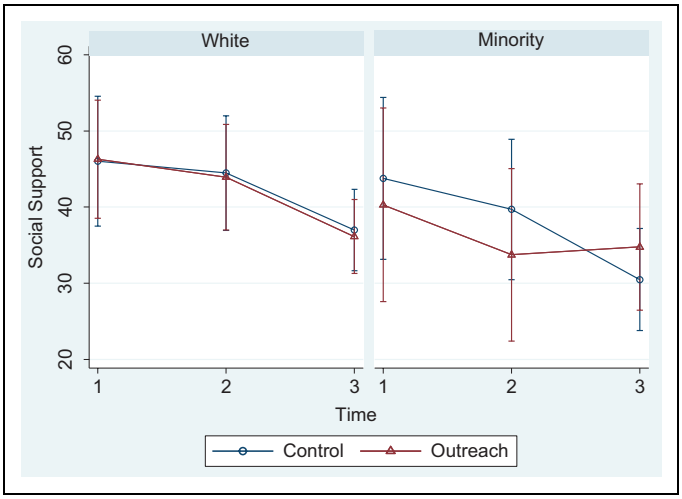

Figure 3. Adjusted predictions of social support with 95% confidence interval (CI) by race.

significant interaction between treatment type, time, and race (Joint Test: $\chi^2 = 1.83$, $df = 2$, $p = .40$), suggesting no disparities in the treatment effect between Whites and minorities (see Figure 3 and Table 2). We tested an interaction of treatment type, time, and ethnicity as well, but no significant interaction effect was found (not shown). Finally, given the significant main effect of gender ($b = 13.34$, $p < .001$), we also tested an interaction of

treatment type, time, and gender. However, no significant interaction was detected (not shown), suggesting that male youth had higher levels of social support, regardless of treatment type and time periods.

Discussion and Applications to Social Work

The purpose of this study was to evaluate the effectiveness of the program as compared to SAU on changes in social support between baseline and follow-up. In addition, we sought to determine whether there were racial/ethnic disparities in the use of social support as a function of the program. Overall, we found that our sample experienced a decrease in the level of social support they received across the waves of data collection. Moreover, the effects of the program on the extent of social support did not differ between those in the program and those who received SAU, regardless of the racial/ethnic background of the young adults in our study. That is, the program, albeit grounded in the relationship-based model, did not contribute to elevated levels of social support as compared to SAU.

Although there are no salient differences, these findings have important implications. First, our findings suggest that despite its greatest intentions, this program specifically, and independent living services, more generally, may need to adapt in order to effectively ameliorate foster youth's barriers to accessing and actively engaging in activities to increase social support during and after transitioning out of foster care. Although the positive influence of attaining and nurturing supports for youth aging out of foster care is on its way to becoming a well-documented protective factor (e.g., Ahrens, DuBois, Richardson, Fan, & Lozano, 2008; Daining & DePanfilis, 2007; Greeson, Usher, & Grinstein-Weiss, 2010; Munson & McMillen, 2009; Osterling & Hines, 2006; Salazar, Keller, & Courtney, 2011), more research is needed to identify how, when, and under what conditions to implement evidence-based, culturally responsive interventions (once developed or adapted) to ensure youth are connected to peer, social, and community networks during and after their experience in foster care. How might outreach workers and child welfare caseworkers assist youth in building the skills, confidence, and motivation, despite the likely history of impermanent relationships, to develop and nurture long-lasting and sustainable social supports? Why are current relational modalities and independent living services ineffective in increasing social supports over time for emerging adults formerly placed in foster care?

Ahrens et al.'s (2011) seminal work may help shed light on how to address these lingering questions. Based upon qualitative inquiry regarding the role of nonparental adults in the lives of young adults who were formerly placed in foster care, they generated three hypotheses for further investigation that, if tested, would lend to important implications on how to develop effective, culturally engaging independent living services to promote positive adult mentoring relationships. They suggest the following: (1) examine the influence of having an adult mentor more formally incorporated into service delivery during the youth's transition out of foster care; (2) determine the extent to which specialized training for mentors of youth in foster care effects the quality and duration of mentoring relationships; and (3) determine if greater attention to the criteria on which foster care youth are matched with mentors (e.g., personal interests, similar cultural backgrounds, beliefs, values, experiences as former foster youth) in formal mentoring programs contributes to permanent sources of social support. Addressing these questions may illuminate how to refine or develop interventions to increase social support during a critical and sensitive developmental time period when such support is most needed to promote positive developmental outcomes. For example, youth in long-term natural mentoring relationships report less stress and are less likely to be arrested (Munson & McMillen, 2009) and experience depressive symptoms (Salazar et al., 2011). Moreover, rooted in the life course and resiliency perspectives, Greeson (2013) advocates for the reshaping of child welfare practice in order to incorporate use of natural mentors to cultivate caring relationships and social support for foster youth who are at risk of aging out. To that end, more research is needed to understand the organizational, socioecological, and provider-level factors that mediate or moderate the relationship between mentoring interventions and increased social support networks.

Our findings also suggest that regardless of the racial/ethnic background of youth making the transition from foster care, the positive effects of SAU and the Outreach program to increase social supports diminished over time. This is the first study to provide evidence that there are no differences in levels of social support between minority and nonminority youth making the transition to adulthood.

Although our findings are noteworthy, we must call attention to a few limitations. First, there are reasons to be skeptical of our finding that disparities in social support were not tenable. Aggregating African American, Asian, American Indian, Alaskan Natives, and Multiracial adolescents into one group does not allow us to speak to the collective experience of each respective racial/ethnic group. However, due to the small sample size in each respective group, we had to aggregate them into a "minority" subsample. This underscores the need to incorporate effective methods to ensure youth of color engage in social support services (e.g., targeted recruitment to services that align well with cultural beliefs, values, and interests) and likewise are included in research in sufficient sample sizes. Qualitative inquiry to identify core themes that relate to motivation and active engagement in mentoring and other social support services for youth of color is warranted.

On a grander scale, it is also necessary to point out that the findings are limited in generalizability. The organizational supports and resources housed within the Massachusetts DCF to provide social support may differ vastly from more populated, racially diverse geographical areas. Moreover, the sample consisted solely of youth receiving intensive, treatment oriented foster home placement. The findings might not apply to the much broader populations of youth in nontreatment foster home care and group home care. Finally, we relied on a count variable of each social support item. This method dispels some of the context to understand the specific types of activities and experiences that can increase social supports.

Despite these limitations, our study is indeed the first to our knowledge to examine the differences between an ILP and SAU

to increase social support among youth in foster care transitioning to adulthood, using a rigorous RCT design. Given that our findings showed no significant differences between the intervention and control groups, concerted efforts are needed to develop more intensive services (e.g., natural mentoring interventions) that are supported by evidence and relate to the experiences of the racially diverse pool of youth in foster care. Until then, caseworkers, outreach workers, and researchers must be critical of what, how, and by whom content is delivered in interventions aimed to increase social support in this vulnerable population. Addressing these questions proactively will be instrumental in reshaping independent living services as funded by CFCIP to increase social support for young adults aging out of foster care.

Authors' Note

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