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Evaluating the Self-Determination Model for Older Youth in Foster Care: Establishing Efficacy and Exploring Moderation of Response to Intervention

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Abstract: Limited rigorous research has been conducted to evaluate the impact of interventions designed to promote the successful transitions of young people exiting foster care. The current study builds on previous experimental evaluations of the *My Life* Model (MLM) for self-determination enhancement, which demonstrated effectiveness in improving educational and transition-to-adulthood outcomes for youth in foster care with disabilities, including those with mental health challenges. The model features one-on-one youth-directed coaching and near-peer mentoring to increase self-determination and goal achievement. The current study was the first to test the impact of the model with a diverse population-based cohort of youth aged 16.5-18.5 in foster care (N=293), including those with and without disabilities, on key model outcome indicators of self-determination and self-efficacy. This study also explored potential moderation by disability status, trauma symptoms, placement stability, and placement restrictiveness. Findings show that, compared to the randomized control group, the treatment group had greater post-intervention and one-year follow-up gains on several indicators of self-determination. Moderation analysis demonstrated no difference in intervention effectiveness for youth with or without disabilities, suggesting the universality of this approach. Findings also suggest that foster youth participants with low-to-average risks in terms of placement stability, placement restrictiveness, and traumatic stress levels seem to benefit most from the intervention, although youth who are at higher risk due to low placement stability, high placement restriction, and high traumatic stress still showed some benefit of participating in the intervention on some measures. *My Life* is one of only a few intervention models with experimental evidence of effectiveness with older youth in foster care. This validation study establishes that the approach has benefits for both youth with and without disabilities, as well as providing the first information available on the influence of critical barriers facing many youth in care.

INTRODUCTION

Of the 253,103 children and youth who exited foster care nationally in 2018, approximately 15% were 16 or older, and more than 18,000 youth exited through emancipation or running away (US Department Health and Human Services, 2019). Unfortunately, research findings consistently document poor transition outcomes for young people emancipating from foster care, including low levels of educational and postsecondary attainment, employment and self-esteem, as well as high rates of early parenting, homelessness and criminal justice involvement (see Gypen, Vanderfaeillie, De Maeyer, Belenger, & Van Holen, 2017, for a recent systematic review). Unfortunately, these disparities have been shown to persist through young adulthood, with 20% of former foster youth, ages 25-27, still not having obtained a high school diploma or a GED, compared to 6% in the general population, and only 8% having graduated with two- or four-year postsecondary degrees, compared to a 46% post-secondary graduation rate for young adults in the general population (Courtney et al., 2011). Further, their median annual earnings were $18,000 below those of young adults in the general population, and their incarceration rates were ten times greater than their peers (Courtney et al., 2011).

Poor outcomes are further exacerbated for the disproportionate number of young people in foster care with disabilities and mental health stressors. Studies suggest that 30-40% of children and youth in care are in special education (Geenen & Powers, 2006; Lambros et al., 2010), with prevalence rates of 50-60% for older foster youth (Hill, 2012, Schmidt, et al., 2013; Wulczyn et al., 2009). Pecora and colleagues (2006) showed that 54% of young adults who had recently exited foster care had a diagnosed mental health condition, and in the Midwest study, 33% of participants had social anxiety, 25% had depression, 60% had PTSD, and 15% were taking psychotropic medications (Courtney et al., 2011). These rates are much higher than for

US youth overall, 13.2% of whom received special education services (US Department of Education, 2019), with a 21.4% rate of lifetime mental health conditions for 13 to 18-year-olds (Merikangus et al, 2010). Further, young people in foster care who are identified with disabilities and/or mental health challenges have been shown to experience even poorer outcomes than youth in foster care without these challenges (Anctil et al., 2007; Geenen & Powers, 2006; Smithgall, Gladden, Yang, & George, 2005). Increased disparities in exposure to secondary education barriers, to low expectations and stigma, to various restrictions that limit opportunities to engage in typical transition-to-adulthood activities, and to prosocial support are some of the factors underlying poorer outcomes among youth exiting foster care with disabilities and mental health challenges (Courtney & Hughes-Heuring, 2005; Geenen & Powers, 2006, 2007; Morton, 2015; Pecora, 2012; Quest et al., 2012; Schmidt et al., 2013).

Three additional factors known to contribute to the poor outcomes of youth exiting foster care are exposure to childhood trauma, placement instability, and placement restriction. Trauma and maltreatment impact behavior and development, and research has demonstrated an association between childhood trauma and adverse adult outcomes (Felitti, et al., 1998), such as increased criminal behaviors (Roos et al., 2016), use of drugs and alcohol (Shin, McDonald, & Conley, 2018), mood and anxiety disorder (Carr et al. 2013), and engagement in risky sexual behaviors in adolescence (Thompson, Lewis, Neilson, et al., 2017). Research has also shown that foster placement instability, generally resulting from a complex combination of child-, family-, and system-level factors (Waid, 2014), is associated with youth difficulties across multiple life domains. Importantly, foster placement instability is consistently associated with antecedent, concurrent, and subsequent youth behavioral challenges and mental health difficulties (Aarons et al., 2010; Newton, Litrownik, &Landsverk, 2000; Rubin, O'Reilly, Luan, & Ocalio, 2007; Stott,

2012; Vreeland et al., 2020) which are themselves expected to impact successful exits from foster care. For example, a recent study with a representative sample of older foster youth in California showed placement instability as an important factor predicting PTSD, alcohol and substance use problems, and suicide attempts (Okpych & Courtney, 2018). And while limited research has been conducted on the role of placement restriction, evidence suggests that youth living in more restrictive settings have limited opportunities to make choices and carry out age-typical activities, which negatively affects their mental health (Holtan, Rønning, Handegård, & Sourander, 2005), quality of life (Wehmeyer & Schwartz, 1997), self-determination (Wehmeyer & Shogren, 2016), and ultimately their ability to assume adult roles. Consistent with these findings, studies have found transition-age foster youth with disabilities to have increased youth-perceived restriction and actual placement restriction, with males in foster care with disabilities specifically living in more restrictive placement types (Schmidt et al., 2013), and that perceived restriction among foster youth with disabilities was associated with internalizing mental health stressors and lower quality of life (Lee, et al., 2018).

Benefits of Self-determination Enhancement

Limited rigorous research has been conducted to evaluate the impact of interventions designed to promote the transition-to-adulthood success of youth exiting care. One promising area for intervention with youth in foster care is self-determination enhancement, which originates from multiple fields, including positive youth development, health self-management, and transition support for youth in special education (Algozzine et al., 2001; Deci & Ryan, 2002; Catalano et al., 2004; Gloppen et al., 2010). Several convergent definitions of the self-determination construct have emerged, including self-determination as intrinsic motivation driven by universal needs for competence, autonomy, and relatedness (Deci & Ryan, 2002), as

"acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influence or interference" (Wehmeyer, 1996, p. 22), and as "self-directed action to achieve personally valued goals" (Powers, et al., 1996, p. 292). Thus, self-determination can be understood as both intention (motivation) and expression (action) to make decisions, to direct one's actions, and to exercise rights and responsibilities, within the context of an individual's culture, experiences, and aspirations. Expression of self-determination is promoted by a combination of information for decision-making; opportunities to identify and pursue goals and to learn from success and failure; achievement, partnership development and self-regulation skills; and supportive allies (Powers, et al., 2018). A growing body of research has affirmed the promotive role of self-determination in positive youth development (Catalano et al., 2004), and in quality of life outcomes for youth with chronic health conditions (McDougall et al., 2016). Likewise, Lee and colleagues (Lee et al., 2018) found self-determination to be a protective factor in preventing externalizing and internalizing mental health disorders and enhancing quality of life among youth with disabilities exiting foster care.

While the negative effects of childhood trauma, placement instability, and placement restriction on young adult outcomes have been documented, it is not known whether these factors influence response to an intervention focused on promoting self-determination. Such knowledge could be used to identify youth most likely to respond to intervention and also could inform adaptation to better support youth who have these experiences. Additionally, research has not yet examined the degree to which disability status, often considered to be associated with foster care-related risk factors such as placement stability and restrictiveness and trauma symptoms, may or may not influence intervention effectiveness for enhancing self-determination; evidence that it does not would suggest the universality of such an approach.

My Life Self-determination Model

The *My Life Model* (MLM) for youth in foster care is adapted from the *TAKE CHARGE* self-determination model, which was previously developed and field-tested by the investigators with youth who experience disabilities (Powers et al., 2001a, 2001b). The MLM features youth-directed coaching and near-peer mentoring to increase self-determination and goal achievement. Building upon sources for promoting self-efficacy (Bandura, 1997), the MLM focuses on increasing youths': 1) experiences of mastery, 2) vicarious learning from supportive peers and adults, 3) verbal persuasion from coaches and other influential people who bolster the youth's confidence, and 4) positive interpretation and regulation of emotional and physiological states.

Over the course of one year, youth participating in *My Life* meet weekly with their coaches for 60-90 minutes of didactic and community-based interaction. Youth are supported to identify and pursue transition goals that they prioritize as most important, and in the context of carrying out activities to pursue their goals and manage challenges experienced along the way, they learn and apply key self-determination skills relating to achievement (e.g., decision-making, problem-solving), building allies (e.g., schmoozing, negotiation), and self-regulation (e.g., managing stress). Throughout, coaches provide relational, experiential and skill support, tailored to the desires and needs of each youth. For example, coaches may offer an empathetic and affirming ear around stressors a youth is facing, support youth to rehearse a skill (e.g., negotiating with a foster parent) and guide youth through activities tied to their goal achievement (e.g., call an agency for information, visit a college). Over time, coaches systematically fade their support provision as youth's capacities expand. Coaches also assist youth in convening a youth-directed meeting of people who they choose, to share their goals and to negotiate needed opportunities and support, including potential support needs after *My Life* participation ends.

The second interrelated MLM intervention element is participation in 4-5 “near-peer” mentoring workshops, involving participants and older young adults having similar lived experiences. Workshops focus on topics selected by youth and provide opportunities for learning, sharing experiences and ideas, and engaging in fun activities. Through these program elements, the MLM supports youth in expanding their information, skills, and opportunities to successfully identify and pursue their goals, to establish and utilize partnerships with supportive adults and peers, and to appreciate and foster their strengths and confidence.

Current Study

The current study builds on previous experimental evaluations of the MLM with youth in foster care with disabilities, including mental health challenges. The model was originally adapted for foster youth from an approach experimentally validated with students in special education (Powers, et al., 2001a; Powers et al., 2001b), and subsequently showed positive effects in two longitudinal RCT studies with foster youth with disabilities. The first was a pilot study (N=69) with youth in foster care and special education; this study tested the model with a 12-month intervention and one-year follow-up, and showed that the treatment group had greater gains compared to the control group on measures of self-determination, quality of life, transition planning, and completion of independent living activities; further, self-determination mediated improvement in dimensions of quality of life, including individual control, community integration, productivity, and well-being (Powers et al, 2012). The second longitudinal RCT (N=123) evaluated the efficacy of the model when delivered over nine months and focused on the high school and transition outcomes of students in foster care and special education. Here analysis showed that compared to the control group, the intervention group had significantly greater gains in self-determination, engagement in educational planning, academic performance,

postsecondary preparation, as well as reduced anxiety and depression (Geenen et al., 2013). The *My Life* model was also subsequently adapted to provide the foundation for Better Futures, which specifically focuses on increasing the post-secondary participation of youth in foster care with mental health challenges (Phillips, Powers, Geenen, et al., 2015); a longitudinal RCT of the Better Futures program revealed significantly greater post-secondary participation, self-determination, hope, and mental health empowerment for the intervention group (Geenen, Powers, Phillips, et al., 2015).

Building on these experimental findings with foster youth with disabilities, the current study evaluated the impact of the *My Life* model with a diverse population-based cohort of youth exiting foster care, including those with and without disabilities. It is reasonable to question whether an intervention that has previously been shown to be effective for youth in care with disabilities would necessarily be specially tailored to that group, or whether it could be designed and delivered in such a way as to be effective for youth both with and without disabilities. Addressing this question was a primary aim of the study, as well as investigating potential assumptions that disability could be a limiting factor in youth benefitting from a self-determination-oriented intervention. Thus, disability status was considered as a potential moderating factor for intervention effects, to test whether youth without disabilities would differentially benefit from participation, compared to those with disabilities.

This paper specifically reports findings related to outcomes of self-determination and self-efficacy, which are the key determinants of the model. We also explored potential moderation of response to intervention by disability status, as well as by other circumstantial factors related to foster care which we expected could inhibit impact. This study tested the following hypotheses:

1. Youth in the intervention group would demonstrate increased self-determination and self-efficacy, compared to youth in the control group.
2. Intervention effects would be moderated by disability status.
3. Intervention effects would be moderated by circumstances of placement instability, placement restrictiveness, and the experience of trauma symptoms. Specifically, higher trauma-related stress, increased placement restriction, and increased placement instability would be associated with reduced response to intervention.

METHODS

The study was conducted by combining two concurrent, rigorous, large-scale randomized trials of the *My Life* model, funded by the National Institutes of Health (NIH) and the Institute for Educational Sciences (IES). The NIH study involved adolescents in foster care (n=139) and the IES study involved adolescents in foster care who also received special education services (n=154). The studies had parallel designs, common measures, and were conducted by the same research team, allowing us to comprehensively and systematically evaluate the intervention by inviting the participation of all eligible youth in the greater Portland, Oregon area during the three-year enrollment period, and to combine the data for robust, population-based analysis. All participants completed a comprehensive baseline assessment (hereafter, "Time 1"), were randomly assigned to the control condition or to the *My Life* program for one year, completed a post-intervention assessment (12 months, "Time 2"), and then completed a follow-up assessment one year after the intervention ended (24 months, "Time 3"). The study was conducted by the Research Consortium to Increase the Success of Youth in Foster Care, a partnership among PSU Regional Research Institute researchers, the Oregon Department of Human Services (DHS), and Portland Public Schools, which liaised with other school districts involved in the study.

Participants

The sampling frame for the combined study included three criteria: (a) 16.5 to 18.5 years of age at study entry, (b) under the guardianship of Oregon DHS (with at least 90 days in foster care), and (c) residing in the study's target geography. The sampling of all eligible youth in three counties yielded a geographically diverse sample reflecting the primarily urban areas of Multnomah County (the city of Portland), the primarily suburban areas of Washington County, and the suburban and more rural areas of Clackamas County. To recruit the sample, the DHS child welfare agency first generated a list of all youth who met eligibility requirements. Next, a Portland Public Schools liaison to the project cross-referenced this list with listings of youth who currently received (or had previously received, if they were no longer enrolled) special education services, to accurately identify special education plus foster care status. Similarly, a representative from the DHS developmental disabilities office cross-referenced the list with their program participants to identify youth also served by that program.

After caseworkers were notified, all eligible youth and their caregivers were approached for recruitment, except in rare instances in which a caseworker expressed a concern (e.g., the youth was in crisis, moving out-of-state, or non-English speaking) or the youth was in a placement that did not allow access to the community as required for the intervention (i.e., youth was in detention or secure treatment and therefore was unable to work on community goals with a coach). Over 90% of youth chose to participate in the study following an orientation meeting and the child welfare agency provided consent following youth assent. All study procedures and protocols were approved by the Institutional Review Board of the University, the DHS Child Welfare Research Unit, and the research review committees of partnering school districts, and data sharing agreements were established with the school districts and county-level agencies.

To ensure that the intervention and control groups would be relatively similar on key demographic variables, prior to randomization youth were blocked on whether they received Independent Living Program (ILP), special education, and/or Developmental Disability services. (Note that Oregon delivers federally-supported Independent Living [IL] services for transition-age foster youth through the ILP, which provides transition planning and life skills training to youth in foster care aged 16-20. We blocked by ILP status prior to randomization to ensure that intervention effects were not confounded by ILP participation.) While ILP status was based on youth self-report, school districts provided special education status and the county-level agency provided developmental disability service status (note that all youth identified as receiving developmental disability services also were in special education). The control group received typical transition services, which could include special education classes, case managers, individualized transition planning, and ILP services; these typical services were also still accessible to youth in the intervention group. For participants randomized to the intervention, current caregivers were oriented and consented, and throughout the intervention were provided with monthly updates on the youth's progress and invited to share their feedback with coaches.

Sample Characteristics

Table 1 shows the demographics for the combined sample. We include participants' self-reported demographic information (e.g., race/ethnicity) from a project-specific measure to reflect and affirm self-identified youth characteristics, rather than using administrative data categories (e.g., Schmidt et al., 2015). Time in foster care, current placement type and recent moves, and education and service enrollment were collected from child welfare agency and school district administrative records. There were no statistically significant differences between the intervention and control groups at baseline on any of the listed characteristics.

Retention. Utilization of retention strategies developed through prior studies (Blakeslee, et al., 2013) resulted in acceptable overall attrition for this population (21%), given their age and life circumstances. At baseline, 293 youth were enrolled, assessed, and randomized to condition (149 control, 144 treatment); the treatment group is smaller because we required youth to attend one coaching session before they were considered fully enrolled in the intervention, and five did not do so. At Time 2 (post-intervention, 12 months past baseline), 248 youth were assessed (132 control, 116 treatment), 26 had withdrawn, and 19 could not be located. At Time 3 (24 months), 9 more youth had withdrawn and another 8 could not be located, with 231 assessed (123 control, 108 treatment). At all time points, five youth had modified assessments (e.g., shorter packets completed by caregivers) due to substantial disability-related barriers that prevented them from directly completing assessments; these data are not included in the analysis reported here.

[TABLE 1]

Intervention fidelity. The *My Life* model includes one-on-one weekly coaching of participants over the course of one year, with the expectation that about one-third of this time is engagement in experiential or *in-situ* activities to pursue goals or manage challenges (e.g., gathering information, meeting with others, visiting a college, taking a walk together). Youth also attend quarterly workshops co-facilitated by "near-peer" mentors who were formerly in foster care and who could speak to their own successful transition experiences. A fidelity of implementation checklist was used to measure participant engagement in the intervention components (detailed model fidelity findings will be reported in a separate paper). Youth in the intervention group spent an average of 50.00 hours (SD=26.44) with their coach over 32.39 (SD=14.06) in-person meetings. The average distribution of coaching minutes was 31.56% experiential, 36.54% didactic, and 31.13% relationship-building time. Youth attended an average

of 3.21 mentoring workshops (out of four). Coaching was delivered by 16 unique coaches (10 staff members and 6 supervised MSW students), three of whom had lived experience in foster care, supporting the feasibility of intervention delivery by those with diverse backgrounds.

Measures

Data were collected by trained graduate and undergraduate students who were generally blind to study condition (in some cases, assessors needed to enlist the help of a youth's former coach in contacting the youth for post-intervention and follow-up assessment). Participants completed valid and reliable scales used in previous research to assess key outcomes of self-determination and career-oriented self-efficacy, shown in Table 2. Participants also completed a project-specific outcome survey to capture indicators related to foster care placement, satisfaction with current living situation, experiences with secondary and post-secondary education, employment and career interests, relationships with family members and service providers, experiences of running away, homelessness, and juvenile justice system involvement; these data will be shared in a forthcoming paper. Lastly, the project also collected extensive demographic, school, and foster care history from administrative records.

[TABLE 2]

Self-Determination

Arc Self-Determination Scale (ARC). This 72-item self-report measure (Wehmeyer & Kelchner, 1995) provides data on four components of self-determination and a global self-determination score, and has been normed with over 500 students, demonstrating adequate validity and reliability (Wehmeyer, 1996). The scale has been used in evaluation of interventions to promote self-determination (Wehmeyer et al., 2000) and research on the importance of student involvement in educational and transition planning (Cross et al., 1999; Sands et al., 1999; Zhang,

2001), and the measure was used in an earlier test of the *My Life* model (Powers et al., 2012). The scale demonstrated good reliability in the current study at the three time points (Cronbach's alpha = .87, .89, and .90 at baseline, post-intervention and follow-up, respectively).

Self-attribution of Accomplishments. At each annual assessment, participants were interviewed by a trained assessor and asked to name all their accomplishments in the past year, with access to cognitive tools such as a calendar and reference to key past events in their lives to anchor their recollections. The total number of identified accomplishments was recorded, excluding restated accomplishments and future accomplishments. Findings from previous intervention research using this procedure showed significant differences in self-attribution of accomplishments favoring the treatment group (Geenen, et al., 2013; Powers, et al., 2012).

Self-determination Skills Assessment. The annual interview was also used to assess key skill development. Participants were first asked to name a goal that they have, and then to describe all the steps they would need to do to reach that goal. They were next asked to describe all the things they could do to get adult support with a goal. Lastly, they were asked to imagine that life had been stressful at home and school lately, and to describe what they could do to help lighten the stress and feel better. Assessors followed a standard protocol and each interview was videotaped (or audiotaped upon youth/guardian request). An observational coding system was developed by the investigators and implemented by two research assistants and an investigator. Coders completed 20 hours of training, followed by 40 hours of supervised coding of study tapes; protocols and procedures were refined until inter-rater reliability consistently exceeded 85%. Coders were blind to study condition. Coding measured: (a) identification of at least one goal, and identification and count of discrete steps to reach that stated goal; (b) identification and count of discrete activities named to enlist adult support; and (c) identification and count of

discrete activities named to manage stress, and assignment of each of to an *a priori* category: (i) Seek/do activities with others; (ii) Self-expression (e.g., journal, painting); (iii) Self-talk or self-reflection (e.g. keep a positive outlook, self-monitoring); (iv) Physical activities (e.g., running, sports, yoga); (v) Non-physical relaxation activities (games, meditation, listen to music); or (vi) Other (e.g., organizing). One-third of the tapes at each time point were coded by both observers and inter-observer agreement was calculated for each coding category at each time point, with a mean inter-observer agreement rate of 89.1–98.3% for the four indicators used in this study. These are *steps to reach a goal*, number of *adult support strategies*, the sum of identified *stress management strategies* across all categories, and the count of categories for which at least one strategy was named (i.e., the range of categories or breadth of stress management repertoire).

Self-Efficacy

My Life Self-Efficacy Scale (MLSES). This 17-item scale was developed for this study to measure self-efficacy related to self-determination, reflecting the model's theoretical association with self-efficacy theory (Bandura, 1997) (i.e., the MLM focus on promoting youths' enactive attainment or mastery, vicarious learning, exposure to positive verbal persuasion, and positive self-attribution). Examples of items include: *I am confident that I can solve problems that keep me from achieving goals*; *I am confident that I can make agreements with adults to help me in specific ways;* and *I am confident that I can keep myself from being overwhelmed by stressful situations*. The scale demonstrated an acceptable three-factor structure accounting for 53% of the variance and generally aligned with the model's foci. Overall scale reliability in the sample at the three time points is excellent (α=.91, .92, .93). Reliability for the three subscales at each time point was acceptable: *Achievement* (α=.87, .86, .88); *Self-regulation* (α=.73, .74, .83); and *Working with Others* (α=.76, .77, .82). With respect to convergent validity, the MLSES was

significantly correlated with the General Self-Efficacy Scale (Chen, Gully, & Eden, 2001; r=.69), which was administered solely for validation purposes, and with the Career Decision-Making Self-Efficacy Scale (Betz, Klein, & Taylor, 1996; r=.65).

Career Decision-Making Self-Efficacy (CDSE) Scale. The 25-item CDSE short form measures belief that one can complete tasks necessary to achieve career and educational goals. Given the focus on the transition to adulthood and the theoretical underpinnings of the study, this measure was included to investigate participants' specific development of career-related self-efficacy beliefs. All five scales in the short form have acceptable coefficient alpha values ranging from .73 (self-appraisal) to .83 (goal selection) (Betz, Klein, &Taylor, 1996). The scale showed excellent reliability in the current sample at the three respective time points (α=.96, .96, and .97).

Moderator variables

We tested exploratory hypotheses that intervention effectiveness would be (1) moderated by disability status, and (2) inhibited among participants with relatively higher placement instability, more placement restrictiveness, and more trauma-related symptoms at baseline.

Disability status. These indicators were collected from administrative records at study enrollment, and specifically reflect current or previous participant enrollment in special education services and/or current receipt of developmental disability services in addition to foster care placement. (See the Participants section for description of disability status determination).

Traumatic stress symptoms. Trauma-related stress that may impact intervention effectiveness were measured using the 25-item Child Report of Post-traumatic Symptoms (CROPS; Greenwald & Rubin, 1999). The range is 0-50 and scores of 19 and above suggest potential clinical interest, though not necessarily diagnosis of PTSD. The CROPS has been normed with youth who were incarcerated or had an incarcerated parent, where about 30-40%

exceeded the cutoff, with scores of 16-19 on average (e.g., Arditti & Savla, 2015; Bocknek et al., 2008; Perkins et al., 2016). The *My Life* baseline sample mean (N=285) is 16.24 (SD=8.71) with a median of 15.0 and 37% of the participants being above the 19-point clinical interest cutoff, and scale reliability in the current sample at the three time points is excellent (α = .89, .90, .93). Three groups were created for moderation analysis: youth were assigned to a "low traumatic stress" group if their baseline CROPS score was below one standard deviation from the mean, the "high traumatic stress" group includes those with scores at least standard deviation above the mean, and the rest are the "average" or "moderate" traumatic stress group. (Note that for each of the continuous moderating variables, moderation groups are based on the standard deviation, such that the "average" group for each variable includes about 68% of the sample [within one standard deviation of the mean in either direction], and the low and high groups [below or above one standard deviation from the mean] each include responses from about 16% of the sample.)

Placement stability. The placement stability indicator is based on the total number of days in foster care divided by the number of placements for the current episode (i.e., since the most recent foster care entry), as collected through the child welfare agency's administrative database at baseline. Placement instability is associated with a number of poor foster care outcomes and is expected to impact youth and caregiver capacity to engage in the intervention. The baseline sample mean (N=270) is 492.52 days per placement (SD=513.48), with a median of 312.05 days. For the moderation analysis, three groups were created: participants were assigned to a "high stability" group if their average days in placement were above one standard deviation from the mean (>839 days), the "low stability" group includes those with average days per placement at least one standard deviation below the mean (<122 days), and the rest are in the "average" or "moderate" placement stability group.

Placement restrictiveness. Self-reported placement restrictiveness was measured using three items from the previously-validated Restrictiveness Evaluation Measure for Youth (Rautkis et al., 2009), which assesses respondent perceptions of restriction on communication with others, ability to move freely in the home, and community participation, all of which could impact intervention delivery and thus reduce effectiveness. The baseline sample mean (N=292) is 5.06 (SD=2.12) on 3-15 point scale with a 4.00 median and a range of 3-13. The overall scale reliability in the current sample at the three time points is adequate (α = .66, .73, and .71, respectively). For the moderation analysis, three groups were created: participants were assigned to a "low restrictiveness" group if their average score was below one standard deviation from the mean, the "high restrictiveness" group includes those with scores at least one standard deviation above the mean, and the rest were placed in the "average" or "moderate" restrictiveness group.

Data Analysis

Study outcome variables were measured at three time points (baseline, post-intervention, and follow-up) for the two treatment groups (intervention vs. control). We used a mixed models approach to repeated measures analysis because it allows for greater flexibility in estimating variance-covariance, and because it does not require listwise deletion of missing data (as do traditional ANOVA methods), which can bias the parameter estimates. We examined all of the included variables to ensure that any deviations from normality were acceptable, which they were for all analyses reported here. We estimated each model using an unstructured variance-covariance matrix (individual estimates of each variance and covariance), a heterogeneous compound symmetric form of the matrix, and a compound symmetric matrix. We compared the fit of each of these models using the log likelihood ratios, and for all findings reported here, the unstructured matrix model fit the data better. We used growth curve analysis to determine the

main effects of group (averaged across time) and time (averaged across groups), and to test the overall group-by-time interaction. Because the study had three time points, the overall interaction has two degrees of freedom representing two independent hypotheses. In the event that the intervention effect varied between post-intervention and follow-up, we added pairwise comparisons of Times 1 versus 2 and Times 1 versus. 3. Each model includes baseline participant gender and age as covariates. Significance tests are reported as both two-tailed and one-tailed when there are a priori directional hypotheses. We also report effect sizes (ES), which were calculated by dividing the mean differences between groups by the estimated standard deviation. Standard deviations were based on either the variability from the model or the pooled standard deviation of the groups at baseline. Table 3 shows the baseline means and standard deviations for the study variables at the three time points.

Next, exploratory subgroup analyses tested for the absence of moderation by disability status, and the presence of moderation by variables hypothesized to reduce intervention effectiveness: placement restriction, placement instability, and traumatic stress. First, analysis tested whether the group by time interaction used to test for main effects statistically varied by dichotomous special education or developmental disability status. Next, analyses tested whether the group by time interaction statistically varies for different moderator group levels (low, average, or high, as determined by the baseline mean and standard deviation), and whether these treatment group differences are seen in the pairwise comparisons (e.g., T1 to T2 differences between the intervention groups at each of the three levels for the three moderators). Given the number of subgroup comparisons and the risk of Type 1 error, we compare our results to the expected false discovery rate for the number of comparisons (Wang & Ware, 2013).

RESULTS

Intervention Effects

We analyzed intervention effects related to self-determination and self-efficacy, which are the key determinants of the model. Table 3 below shows the means for the control (C) versus treatment (Tx) groups on measures of self-determination beliefs, applied self-determination skills, and self-attributed accomplishments, as well as model-specific self-efficacy and career-related self-efficacy. The table also includes the two moderators measured at all time points, and baseline placement stability, which was measured once. Next, Table 4 shows the findings from the statistical analysis of overall intervention effects, as well the comparison of intervention group trajectories between baseline (Time 1) and post-intervention (Time 2), and baseline to follow-up one-year after intervention ends (Time 3).

[TABLES 3 AND 4]

Self-Determination

Arc Self-Determination Scale (ARC). While the hypothesized overall group by time effect was not quite statistically significant (F=2.28, p=.053, one-tailed) for this measure, the treatment and control groups did significantly diverge between Time 1 and Time 2 (*t*=1.89, p=.030, one-tailed, ES=.24) and between Times 1 and 3 (*t*=1.98, p=.025, one-tailed, ES=.27), indicating greater score improvement due to intervention, with a small-to-moderate effect size.

Self-attribution of Accomplishments. The group by time effect was statistically significant (*F*=3.27, p=.041, two-tailed) for the number of identified accomplishments, with the treatment group increasing more than the control group from Time 1 to Time 2 (*t*=2.54, p=.006, one-tailed, ES=.27), and to Time 3 (*t*=1.85, p=.033, one-tailed, ES=16), with small-to-medium effect sizes.

Self-determination Skills Assessment.

Steps to Reach Goals. The group by time interaction was significant (F=3.37, p=.037, two-tailed) on this measure, with the treatment group increasing more from Time 1 to Time 3 (t=2.42, p=.017 two-tailed, ES=.20), even though the control group started out higher at baseline.

Strategies to Enlist Adult Support. The group by time effect was not significant (F=0.66, p=.521, two-tailed), and there were no differences between intervention groups at T2 or T3.

Stress Management Strategies. There was no group by time effect for the count of individual stress management strategies participants named (F=2.03, p=.134, two-tailed), although this approaches significance using a one-tailed test (p=.067). Similarly, there was a hypothesized significant effect (F=2.87, two-tailed p=.134, one-tailed, p=.030) on the range of different kinds of stress management strategies named, as well as a significant increase for the treatment group between Times 1 and 3 (t=2.30, p=.012, one-tailed), which had a moderate effect size (ES=.37).

Self-Efficacy

My Life Self-Efficacy Scale (MLSES). There was not a significant group-by-time effect (F=1.10, p=.334, two-tailed) for the new self-efficacy measure developed for this study. The scores do go up over time, but this is consistent for both study groups. There was a trend showing that the treatment group increased more than the control group from Time 1 to Time 3 (t=1.40, p=.082, one-tailed), but no other findings for the scale.

Career Decision-making Self-Efficacy (CDSE) Scale. There were not statistically significant intervention effects for the CDSE in the overall group by time test (F=1.76, p=.173, two-tailed), but the contrast between Times 1 and 3 was significant (t=1.88, p=.031, one-tailed, ES=.27) and favors the treatment group.

Moderation of Intervention Effects

Analysis first tested for moderation by disability—receipt of special education and/or developmental disability services—with no statistically significant moderation of intervention effects by whether participants received these services or not. Next, we analyzed moderation by placement stability, placement restriction, and self-report of trauma symptoms. For each of these, analysis tested for intervention effects at post-intervention (Time 2) and at 12-month follow-up (Time 3) for participants with low, average, and high levels of the moderator, as grouped by baseline scores above and below one standard deviation from the mean. Overall, 144 subgroup comparisons were tested, with 31 of these reaching statistical significance (two-tailed $p<.05$), compared to the seven (5%) that would be expected due to Type 1 error. As detailed below and summarized in Table 5, there were consistent patterns of statistically significant moderation of intervention group differences on the self-determination and self-efficacy measures.

[TABLE 5]

At post-intervention, the treatment group ARC scores showed gains compared to the control group for youth with low levels of traumatic stress (t=2.65, p=.009), and this was nearly significant for those with average stress (t=1.88, p=.062). Treatment group ARC scores showed comparatively greater gains at post-intervention and follow-up for those with average placement stability (t=2.02 [p=.045] and t=2.09 [p=.037], respectively) and average placement restriction (t=2.00 [p=.046] and t=2.10 [p=.037]). Post-intervention comparisons of self-attributed *Accomplishments* favored the treatment group at low (t=2.31, p=.022) and average (t=2.42, p=.017) traumatic stress, average (t=2.10, p=.038) or high (t=2.35. p=.020) placement stability, and average placement restriction (t=2.57, p=.011), and treatment group youth with low restriction named comparatively more accomplishments at follow-up (t=2.16, p=.032).

Next, there was a consistent pattern of moderation on the remaining self-determination variables. There were relative treatment group gains in identified *Steps to Reach Goals* at follow-up when trauma stress was average (t=2.52, p=.013) or high (t=2.34, p=.021), when placement restriction was average (t=2.44, p=.016) or high (t=1.99, p=.048), and when placement stability is low (t=2.38, p=.019) or average (t=2.65, p=.009). There were similar treatment group gains at follow-up on the range of *Stress Management Strategies* when trauma symptoms were low (t=2.60, p=.010) or average (t=2.18, p=.030), when placement restriction is low (t=2.92, p=.004) or average (t=2.28, p=.024), and when placement stability was average (t=2.32, p=.021) or high (t=2.21, p=.029). Lastly, the omnibus test of treatment group by time by placement restriction was significant for *Adult Support Strategies* (F=4.22, p=.016) and the count of identified *Stress Management Strategies* (F=4.45, p=.013), indicating that youths' capacities to identify strategies to obtain adult support and manage stress were moderated overall by restriction. Examination by restriction level showed treatment group youth with low restriction identified more *Stress Management Strategies* than the control group at post-intervention (t=2.19, p=.030), and those with high restriction named more strategies at follow-up (t=2.64, p=.009) and specifically named more strategies to enlist adult support at post-intervention (t=2.26, p=.025)

There were fewer instances of moderation of the two self-efficacy outcomes. The omnibus test of treatment group by time by moderator group was significant (F=3.35, p=.037), indicating an overall intervention moderation effect by trauma symptoms on the CDSE; examining this by level revealed that treatment group youth showed greater gains on the CDSE at post-intervention (t=2.68, p=.008) and follow-up (t=2.17, p=.031) when they were in the low trauma stress group. Next, when placement stability is average, treatment group CDSE scores are lower than the control group at baseline and higher at Time 3 (t =1.98, p=.049), and this

difference was almost significant for those with low stability (*t*=1.89, p=.060); when placement stability is low, the treatment group also had greater gains on the MLSES at Time 2 (t=2.13, p=.034). Lastly, among highly restricted youth, the treatment group had greater gains on the CDSE scores at follow-up (*t*=2.63, p=.009).

DISCUSSION

Findings from this study provide longitudinal evidence that the process-oriented, strengths-focused, and youth-directed approach incorporated in the *My Life* model is an effective strategy to enhance self-determination among young people with and without disabilities who are in foster care. The strongest findings were for the ARC self-determination survey, which showed greater score improvement for the treatment group versus the control group at both post-intervention and follow-up, and for the self-attribution of accomplishments, which demonstrated a main intervention effect favoring the treatment group at post-intervention and one-year follow-up. Additional self-determination findings reflected significant improvement for the treatment group at follow-up on identified steps to reach a goal and on the range of stress management categories named. On the other hand, hypothesized effects for two measures of self-efficacy were not as clearly observed. The Career Decision Self-Efficacy measure showed greater improvement at follow-up for the treatment group, compared to the control group, however the *My Life* Self-Efficacy Scale demonstrated only trend effects in favor of the treatment group. It is unclear whether this weaker finding reflects the newly developed MLSE's need for further psychometric refinement or signals that youths' beliefs around being able to express self-determination may be more tentative than expected.

Considered overall, the aforementioned outcome findings confirm earlier experimental studies demonstrating the effectiveness of the *My Life* intervention to improve self-determination

with youth in foster care with disabilities (Geenen et al., 2013; Powers, et al., 2012), and newly establish the effectiveness of the model for increasing key self-determination indicators in a population-based foster care sample including youth who do not experience disability. This study is also the first to examine moderators of response to self-determination enhancement with this population. Previous studies have shown that self-determination enhancement interventions increase self-determination and transition-to-adulthood outcomes, including for youth in foster care and those with disabilities. However, our study is the first to ask under what conditions self-determination enhancement is facilitated or impeded, which is especially important in the context of foster care, where young people are more likely to experience factors like elevated rates of disability, trauma, and instability and restriction in their foster care placements. We therefore took an exploratory approach in our moderation analysis for the purpose of revealing patterns that can guide future intervention development and research hypotheses.

Importantly, we saw no moderation of intervention effects by special education or developmental disability status alone. This controverts potential assumptions that disability would be a limiting factor in youth benefitting from a self-determination-oriented intervention such as *My Life*, and that the model would need to be specially tailored to support youth with disabilities, thereby making it less responsive to youth without disabilities. We hypothesized and confirmed that youth with and without disabilities would experience similar positive impacts from the intervention, with no statistical distinction between the groups on key self-determination outcomes. This finding highlights the potential of youth with and without disabilities to meaningfully participate in such an intervention if responsively supported to do so, as well as the model's capacity to be delivered in inclusive settings, such as ILP programs and other youth-serving organizations. Further questions also emerge related to whether the model's

inclusive tailoring strengths might be beneficial to youth who experience other marginalizing diversities, such as LGBTQIA and minority cultural and racial statuses. In large part, we attribute the model's inclusive benefits to both its youth-directed design and the considerable effort that was directed by coaches in validating each youth's experiences, strengths, and identification and pursuit of their chosen goals. Coaches facilitated and promoted youths' opportunities to identify and engage in typical transition-to-adulthood activities while also navigating multi-system restrictions and other barriers potentially hindering their participation in such activities (as well as others' potential reluctance to support them in doing so).

On the other hand, we hypothesized that factors like placement instability, placement restriction, and traumatic stress would limit response to intervention. For example, trauma symptoms could limit trust building with the coach, placement instability could limit time for participation, and restriction could limit capacities to pursue goals through participating in community-based activities. Each of these factors also could hinder communication with caregivers around participation, or prevent caregivers from facilitating some intervention activities. Here, we did see a pattern indicating that youth in some circumstances showed a greater response to intervention (which is not to say that other youth did not respond or that the intervention was not or could not be useful).

Overall, the intervention seemed to be most effective for youth experiencing low or average placement restrictiveness, partially confirming the exploratory hypothesis that youth reporting high levels of restriction would show less improvement due, at least in part, to lack of opportunity to actively pursue and achieve their transition goals. Nevertheless, even highly-restricted youth in the treatment group showed improvement on the development of career-related self-efficacy and knowledge of steps for reaching their goals and obtaining adult support,

when compared to highly restricted youth in the control group. With regard to placement stability, as predicted, those youth who entered the study having experienced average or high foster placement stability prior to intervention were more likely to show significant improvement on the hypothesized outcomes compared to the control group. However, those youth with a history of low placement stability nevertheless showed encouraging progress on the CDSE and development of knowledge around steps for achieving their desired goals. Lastly, also as predicted, compared to the control group, youth in the treatment group who entered the study having experienced low or average baseline traumatic stress levels were more likely to show a favorable response to the intervention on the hypothesized outcomes. However, those with high levels of trauma stress symptoms nevertheless showed significant improvement in their knowledge of steps to reach their chosen goals.

Although our analysis suggests that *My Life* is most effective with youth at low to average risk in terms of placement stability, restrictiveness, and trauma, we want to underscore that the "average" group includes about 68% of this representative sample of foster youth (where the "high" and "low" groups have about 16% each, based on the standard deviation for the moderator variable). For example, we found moderation of effectiveness favoring youth with low to average trauma, and we want to clarify that the average group in our sample includes a wide range of lower-middle and higher-middle scores representative of normative trauma for a foster care sample; the young people in the high trauma group were quite high in comparison, even to similarly vulnerable youth populations (e.g., incarcerated youth or those with incarcerated parents: Arditti & Savla, 2015; Bocknek et al., 2008; Perkins et al., 2016), and scored well above the measure's cutoff for clinical interest (Greenwald & Rubin, 1999). However, even this higher-risk group showed an intervention effect on some measures of self-determination enhancement.

Lastly, compared to placement instability and traumatic stress symptoms, which are well-known complicating factors that were built into the development of the *My Life* coaching process with foster youth, placement restrictiveness likely has a more direct impact on some measurable intervention effects. Recalling that restrictiveness is based not on placement type but on youth self-report of freedom to communicate with others, move about the home, and go out into the community, in this case restrictiveness is potentially mediating intervention effectiveness if programming cannot be delivered as designed. That said, even for the high restrictiveness group, we did see significant improvement on self-efficacy and self-determination skill development. This may indicate that in the context of navigating restriction in their placement settings, the intervention supported youth in honing their competencies in these areas (e.g., identifying strategies to manage stress in their restrictive setting, gaining self-efficacy around gathering career-related information), and if responsively supported, perhaps positioning these youth to apply their newly developed competencies to pursue their chosen goals when restriction eases.

Study Limitations

Our findings should be considered in light of relevant study limitations. First, our subgroup analysis testing for moderation by variables of interest should be interpreted with caution. Our analytic approach around moderation is directional, however exploratory, and we acknowledge that some of the reported findings are likely false positives due to chance. Overall, 144 subgroup comparisons were tested, with 31 of these reaching significance for the comparison of the control versus treatment group at the specified moderator level. However, we would only expect 7 of the comparisons to be Type 1 errors (5%), and we are therefore reasonably confident in summarizing the overall pattern of findings and using these to guide further investigation (Wang & Ware, 2013).

Next, we do not specifically address demographic variables of interest. First, participant sex and age were treated as covariates in the analysis, with no significant associations between these and the outcome variables. With regard to race, we also found no significant associations with the outcome variables, most likely due to the predominance of Caucasian youth in the sample (46%) and the low prevalence of the other race categories, thereby precluding sufficiently powered comparison of specific racial categories. We did not want to artificially collapse categories by grouping all non-white youth together as a covariate (although this has support in the literature), especially given that our second largest group (27%) was multi-racial. Although this limitation reflects the demography of the research site, along with increasing tendencies over time for the youth to self-identify as multi-racial (Schmidt, et al., 2015), it prevents us from drawing potential inferences related to intervention effectiveness with regards to race, and future studies should aim for larger samples of youth having one or more non-white racial identities.

Lastly, we want to note that this study specifically reports experimental findings to validate prior studies showing the effectiveness of the theory-based intervention model to impact key variables of interest, and to explore the influence of key factors potentially attenuating effectiveness. This is in line with recommendations for intervention testing approaches that demonstrate successful targeting of key mechanisms (such as self-determination) expected to influence more distal outcomes in human service programming (e.g., Raghavan, Munson, & Le, 2019), which allows for ongoing intervention implementation, adaptation, and refinement to ensure that these key determinants are consistently engaged. Forthcoming manuscripts will separately examine other primary outcomes of interest in the parent study, as well as report more detailed data around intervention model fidelity, participant evaluation of social validity, and potential considerations for implementing the model as a community-based program.

Implications for Policy, Practice, and Research

The *My Life* intervention model was originally developed and tested with youth in care receiving special education and developmental disabilities services, and was rigorously tested here with a population-based sample also including those without identified disabilities. Over a three-year period, every eligible youth in the study region was invited to participate, and about 90% expressed interest; no young people were excluded, except for a very small number of youth whose caseworkers suggested that current circumstances precluded participation (and some of these youth subsequently entered the study at a later date). Thus, the sample for this randomized trial was highly representative of the population, supporting the robustness of the findings and the relevance of the implications for the field. We attribute this sampling success to extensive collaboration between the study partners—the child welfare agency, school districts, and research university—from initial study planning through dissemination, and note the critical role of such partnerships in jointly conducting intervention research to identify effective strategies for supporting youth in care.

Importantly the finding that youth with and without disabilities showed similar benefits from the intervention suggests the potential for universal applicability of such an approach, as well as the potential merit of initially developing and testing an intervention with youth who are at increased risk, considering that an intervention effective with this subpopulation would likely be effective for youth overall. This approach runs contrary to tendencies for interventions to be initially developed around youth perceived to be at "typical" or lower levels of risk within a selected population, and youth with disabilities (including mental health issues) can therefore be excluded from research (e.g., Blakeslee, et al., 2013); after documenting effectiveness for typical youths, interventions may then be adapted to meet the needs of youth perceived to be at higher

risk with different or additional needs. Favoring initial intervention development and testing with at-risk subgroups may have particular applicability in foster care, where a large proportion of youth experience one or more at risk characteristics, including disability status.

Next, the pattern of moderation findings suggests that foster youth participants with low-to-average risks in terms of placement stability, unrestrictive placements, and traumatic stress levels seem to benefit more from the intervention. On the other hand, youth who are at higher risk due to low placement stability, high placement restriction, and high traumatic stress prior to participation in *My Life* still show some benefit of intervention on some of the measures. Relatedly, a lack of statistical moderation for a subgroup that may have a more challenging path to self-determination enhancement does not indicate that the intervention did not bolster the success of some of the youth people in this group. Thus, while the moderation hypotheses around average or low risk were largely confirmed, even those experiencing higher risk were able to benefit, which may inform further intervention enhancements to bolster youths' capacity to minimize the impact of these barriers on their growing self-determination and self-efficacy.

For example, the findings could be deployed to encourage restrictive placement settings to identify increasing opportunities for youth to be supported in pursuing their community transition goals, perhaps by adopting the *My Life* model or similar approaches within their own settings. Likewise, youth who are provided with strengths-based, trauma-focused counseling prior to or concurrent with participating in the *My Life* model may be better positioned to benefit from both these sources of support; this intervention enhancement warrants systematic investigation. Finally, while much placement instability is due to factors beyond youths' control, additional focus could be given to coaching youth to anticipate and develop plans to address their needs and continue their typical activities should a placement change occur, including support

network stability to promote relational permanence in the midst of placement change. Most importantly, while youth may be increasingly supported to manage these common barriers to self-determination while in foster care, mitigation of youth exposure to these limiting factors ultimately warrants continuous system and services improvement.

Additionally, although there were no findings for disability status (which would be expected to be associated with more restrictive placements), youth-reported placement restrictiveness itself did seem to inhibit intervention effectiveness. We think this supports the current trend in child welfare practice and research towards the evaluation of risk and protection as balanced with the priority of typical youth development and the experience of normalcy during adolescence (Pokempner et al., 2015; Simmons-Horton, 2017; White et al., 2015). Among foster youth who experience the range of disability types, including those who are in special education and/or restrictive placements due to mental health diagnoses, protective concerns may impact practitioner readiness to refer young people to programs that encourage young people to develop self-determination—making decisions, exercising rights and responsibilities, engaging in chosen activities—in the context of a system that is often driven by liability concerns. It is promising that we do not see intervention effects being moderated by special education or developmental disability status, because those categories can be shorthand for deciding who gets referred to what programs in child welfare systems. These findings support continued advocacy around youth living in unnecessarily restrictive placements that may impact self-determination as young people in foster care approach the transition to more independent adulthood, as well as providing foster parents adequate supports (e.g., respite, access to quality mental health services, after-hours crisis support) to meet the complex needs of youth in care so that youth can maintain stability over time in lower restrictive settings.

Lastly, this is the first experimental examination of the relationship between the constructs of self-efficacy and self-determination and their potential links for understanding and promoting response to intervention with this population. We introduced a new *My Life* Self-Efficacy Scale (MLSES) aligned with the model foci to empirically link the self-determination model with enhanced self-efficacy; this measure showed expected convergent validity with the General Self-Efficacy Scale (r=.69) and the CDSE (r=.65), and was significantly associated as expected with the primary ARC self-determination measure (r=.51). However, we did not observe significant intervention effects (and minimal moderation) for the MLSES measure, suggesting additional investigation may be needed. It may be that the measure required further psychometric development to be sensitive to intervention, and that analysis will be conducted. On the other hand, findings show that the more specific measure of career-related self-efficacy is influenced by this self-determination intervention, suggesting the potential link between the constructs lies in the model's larger focus on the application of self-determination skills towards youth-identified transition goals. Future research can further explore and establish potential associations between these distinct but related constructs.

Conclusion

My Life is one of only a few intervention models showing evidence of effectiveness with older youth in foster care (Greeson, Garcia, Tan, et al., 2020) and this validation study establishes that the approach has benefits for both youth with and without disabilities. Key model elements contributing to outcomes include youth-directed coaching and support around self-determination skill development, in-situ goal achievement, self-regulation, and partnership with adult allies, and also regular exposure to near-peer mentors who can speak to their own experiences successfully managing challenges during the transition from foster care. This

analysis specifically shows that the model is effective in increasing youths' self-determination, as shown in indices of global self-determination, self-attributed accomplishments and application of self-determination skills, as well as in increasing youths' career-related self-efficacy. Further, participants with low-to-average risks in terms of placement stability, unrestrictive placements, and traumatic stress levels seem to benefit most from the intervention on these outcomes. On the other hand, youth who are at higher risk due to low placement stability, high placement restriction, and high traumatic stress prior to participation in *My Life* still showed some benefit of intervention on some of the outcome indicators. Implementation of theory-based and youth-driven models like *My Life* in the child welfare service array has the potential to significantly increase knowledge and application of youth self-determination promotion and improve transition outcomes in young adulthood, including among those experiencing increased risk.

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TABLES AND FIGURES

Table 1. Baseline sample demographics for combined My Life studies

Characteristic	Control (n = 146)	Intervention (n = 142)	Total (N = 288)
Age (Mean)	17.32 (SD=.61)	17.30 (SD=.62)	17.31 (SD=.61)
Gender (Female, %)	72 (49.3%)	81 (57.0%)	153 (53.1%)
Ethnicity (Hispanic, %)	26 (19.1)	26 (18.8)	52 (19.0)
Race			
Native American	13 (9.1%)	6 (4.3%)	19 (6.7%)
Asian or Pacific Islander	3 (2.1)	6 (4.3)	9 (3.2)
African American	23 (16.1)	23 (16.2)	46 (16.2)
Caucasian	71 (49.7)	61 (43.3)	132 (46.5)
Multi-racial/other	33 (23.1)	45 (31.9)	78 (27.5)
Placement type (youth-reported, %)			
Non-relative Foster Care	98 (67.6%)	86 (59.7%)	187 (63.5%)
Relative Foster Care (Kinship)	30 (20.7)	42 (29.2)	76 (25.9)
Group home/Residential Treatment	8 (5.4)	7 (4.9)	15 (5.2)
With family member (not in placement)	8 (5.5)	7 (5.0)	15 (5.3)
Other (e.g., with adoptive family, on own)	1 (0.7)	3 (2.2)	4 (1.5)
Length of time in foster care (mean years)	5.92 (SD=4.51)	5.74 (SD=4.94)	5.85 (SD=4.72)
Experienced placement change in past year	52 (35.6%)	60 (42.3%)	112 (38.8%)
Received Special Education Services	85 (58.2)	84 (59.2)	169 (58.7)
Received Developmental Disability Services	30 (20.5)	32 (22.5)	62 (21.5)
Enrolled in Independent Living Program (ILP)	69 (47.3)	57 (40.1)	126 (43.8)
Attending school/GED program	131 (89.7)	125 (89.3)	256 (89.5)

Table 2. *Constructs and measures.*

Key Constructs	**Measures**
Self-Determination	ARC Self-Determination Scale (Wehmeyer & Kelchner,1996)
	Self-attributed Accomplishments
	Self-determination Skills Assessment
Self-Efficacy	My Life Self-Efficacy Scale (MLSE)
	Career Decision-Making Self Efficacy Scale (Betz et al., 1996)
Moderators	Disability service status
	Trauma symptoms (CROPS: Greenwald & Rubin, 1999)
	Foster placement restrictiveness (based on Rautkis et al., 2009)
	Foster placement stability (days per foster placement)

Table 3. *Means by time point and intervention group*

	Time 1 (N=288) *Mean (SD)*		**Time 2 (N=243)** *Mean (SD)*		**Time 3 (N=226)** *Mean (SD)*	
	C	**Tx**	**C**	**Tx**	**C**	**Tx**
Arc Self-Determination Scale (ARC)	104.06 (16.89)	102.32 (14.99)	106.13 (16.99)	108.39 (17.03)	107.27 (18.07)	109.46 (17.16)
Accomplishments	2.73 (1.62)	2.41 (1.73)	2.71 (1.65)	3.16 (1.40)	2.85 (1.72)	3.10 (1.76)
Self-determination Skills:						
Steps to Reach Goals	3.11 (2.20)	2.47 (1.88)	2.99 (2.11)	2.61 (1.90)	2.59 (1.71)	3.00 (2.14)
Adult Support Strategies	1.31 (1.09)	1.24 (1.02)	1.38 (1.09)	1.43 (0.93)	1.32 (1.12)	1.51 (1.14)
Stress Management Strategies (Count)	2.35 (1.45)	2.26 (1.57)	2.72 (1.83)	2.48 (1.44)	2.42 (1.67)	2.78 (1.60)
Stress Management Strategies (Range)	1.81 (1.34)	1.66 (0.95)	1.95 (1.22)	1.99 (1.11)	1.78 (1.01)	2.21 (1.18)
My Life Self-Efficacy Scale (MLSES)	68.49 (10.24)	68.04 (8.78)	70.38 (9.13)	71.02 (9.20)	71.03 (9.80)	71.81 (9.06)
Career Decision Self-Efficacy (CDSE)	3.87 (0.66)	3.76 (0.74)	4.00 (0.69)	4.01 (0.72)	4.00 (0.70)	4.07 (0.69)
Post-traumatic Symptoms (CROPS)	15.66 (8.97)	16.83 (8.42)	15.19 (9.16)	15.57 (9.16)	14.74 (10.68)	15.29 (10.20)
Placement restrictiveness	5.13 (2.15)	4.97 (2.13)	4.52 (2.13)	4.38 (2.17)	4.13 (2.03)	4.05 (1.95)
Placement stability	489.53 (517.47)	495.59 (511.28)	--	--	--	--

Table 4. *Overall intervention effects and time point comparisons*

	Group-by-Time			**Time 1–Time 2**				**Time 1–Time 3**			
	F	*p-value (2-tail/1-tail)*		*t*	*p-value (2-tail/1-tail)*		*ES*	*t*	*p-value (2-tail/1-tail)*		*ES*
Arc Self-Determination (ARC)	2.28	.105	.053	1.89	.060	**.030**	.24	1.98	.050	**.025**	.27
Accomplishments	3.27	**.041**	**.021**	2.54	**.012**	**.006**	.27	1.85	.066	**.033**	.16
Self-determination skills:											
Steps to Reach Goals	3.37	**.037**	**.019**	0.60	.548	.274	--	2.42	**.017**	**.009**	.20
Adult Support Strategies	0.66	.521	.261	0.50	.620	.310	-	1.15	.253	.127	-
Stress Management (Count)	2.03	.134	.067	0.44	.663	.332	-	1.50	.135	.068	--
Stress Management (Range)	2.87	.059	**.030**	0.80	.422	.211	-	2.30	**.024**	**.012**	.37
My Life Self-Efficacy (MLSES)	1.10	.334	.167	1.09	.277	.139	-	1.40	.163	.082	--
Career Decision Self-Efficacy (CDSE)	1.76	.173	.087	1.26	.21	.11	-	1.88	.062	**.031**	.27

Table 5. *Summary of intervention effects within the moderator groups (low, average, or high).*

	Trauma Symptoms		**Placement Stability**		**Placement Restriction**	
	T1-T2	*T1-T3*	*T1-T2*	*T1-T3*	*T1-T2*	*T1-T3*
Arc Self-Determination (ARC)	LOW*, AVERAGE†		AVERAGE*	AVERAGE*	AVERAGE*	AVERAGE*
Accomplishments	LOW*, AVERAGE*		AVERAGE*, HIGH*		AVERAGE*	LOW*
Self-determination Skills:						
Steps to Reach Goals		AVERAGE*, HIGH*		LOW*, AVERAGE*		AVERAGE*, HIGH*
Adult Support Strategies					HIGH*	
Stress Management (Count)					LOW*	HIGH*
Stress Management (Range)		LOW*, AVERAGE*		AVERAGE*, HIGH*		LOW*, AVERAGE*
My Life Self-Efficacy (MLSES)					LOW*	
Career Decision Self-Efficacy (CDSE)	LOW*	LOW*		LOW†, AVERAGE*		HIGH*

* p<.05. † p<.10.