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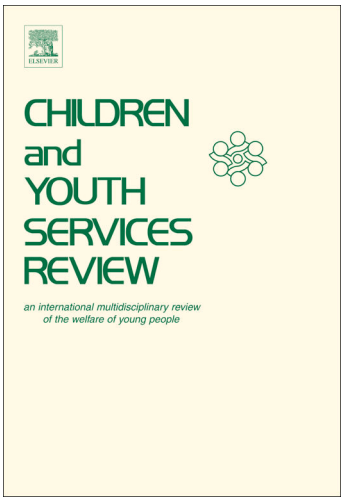

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Intervention Development to Improve Foster Youth Mental Health by Targeting Coping Self-Efficacy and Help-seeking

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ABSTRACT

This study articulates the iterative development of an intervention called Strengthening Youth Networks and Coping (SYNC), which is designed to target coping self-efficacy and help-seeking intentions and behaviors among youth in foster care. The overarching goal is to design an intervention that will be a feasible and acceptable enhancement to existing child welfare services, and that will address modifiable determinants among adolescents involved in child welfare system that are related to elevated risk for mental health challenges, limited support network capacity, and service disengagement after exiting foster care. In this paper, we describe our initial needs assessment, explain how we selected proximal intervention mechanisms (i.e., intermediate outcomes) to target, and outline the preliminary intervention development process, including ongoing insights we received from a research advisory group including members with lived experience. Next, we report and discuss the initial acceptability pre-testing data collected from youth (N=30) as well as feasibility data collected from providers (N=82), results from which were used to refine the SYNC intervention framework prior to robust efficacy testing. Findings highlight the need and importance of targeting youth coping and help-seeking, integrating programming within existing transition services, delivering this content in a group-based format that includes near-peer mentors and facilitators with lived experience, and developing options that work for the heterogeneous population of young people in foster care. The results also highlight the key objective of capturing youth's interests prior to enrolling in the program (e.g., language used in recruitment materials), holding their interest throughout the program (e.g., creating opportunities for youth to engage with other youth with similar experiences), and suggestions to encourage youth's engagement and participation. This paper articulates the value of this intervention development approach, and the sequential phases of this intervention development process as well as the results, which may be useful to applied researchers and practitioners working with youth in foster care and other priority populations.

KEYWORDS: foster youth, mental health, transition to adulthood, coping, help-seeking, support networks

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1. INTRODUCTION

Transition-aged foster youth experience significant and unique risks to mental health and well-being during and following the transition to young adulthood. Youth served by the child welfare system are five times more likely to have problem behaviors and poor psychosocial functioning compared to the general population (Lou et al., 2008). Typical youth development is facilitated in the context of stable family, school, and community networks (Brooks et al., 2012; Institute of Medicine, 2013; McPherson et al., 2013), and these socio-ecological contexts have protective associations with lower emotional distress, suicidal ideation, and substance abuse in young adulthood (Steiner et al., 2019). However, the opportunities presented within these developmental contexts are often limited for youth in foster care due to the challenging circumstances they commonly experience (e.g., maltreatment, behavior problems, relational disruption). Repeated socio-ecological disruption due to placement instability, non-relative or group placement, and residential treatment (Courtney et al., 2001; McCoy at al., 2008; Keller et al. 2007; Wulczyn et al., 2003) can also result in sparse support networks, service disengagement, problem behaviors, and social adjustment challenges. All of these factors further impact the development of psychosocial resilience and supportive peer and adult networks (Perry, 2006; Goodkind et al, 2011; Shook et al., 2011; Samuels & Pryce, 2008). The absence of these critical protective factors can also mean that these youth face increased risk of homelessness, poverty, substance abuse, and other poor outcomes (Shook et al., 2011; Braciszewski & Stout, 2012; Dworsky & Courtney, 2010; Pecora et al., 2006; Winter et al., 2016). Thus, many youth in foster care approach the transition to adulthood with exceptional challenges and without sufficient protective skills or support networks (Berzin et al., 2014; Munson et al., 2013; Singer et al., 2013).

Youth in foster care also face unique psychosocial barriers to formal and informal help-seeking behaviors as an adaptive coping mechanism. For example, youth in foster care are more likely to report support-seeking efforts to be inadvisable, risky, or useless, especially following the experience of multiple placements (Seita et al., 2016). Such cognitive schemas limit the degree to which these youth can benefit from non-parental adult support, which plays a critical role in improving foster youth psychosocial resilience and bridging the shift from foster care services to independence (Ahrens et al., 2011; Munson & McMillen, 2009; Thompson et al., 2016; Salazar et al., 2011). Further, although youth in foster care have elevated mental health challenges—including 60% lifetime disorder at ages 17-18, and twice the normative rate of depression and PTSD (Havlicek et al., 2013; Keller et al., 2010; Mcmillen et al., 2005; Salazar et al., 2013)—they are also more likely to have unmet service needs. At age 17, 68% have behavioral health needs and more than a third have depression or substance dependence; yet, only half of these youth receive services (Vaughn et al., 2007; Brown et al., 2015; Courtney et al., 2014). Additionally, those who meet criteria for mental health disorder at age 17 are half as likely to feel prepared to manage their mental health in young adulthood (Munson et al., 2020). Thus, youth in foster care are likely to be less prepared to cope with emergent challenges impacting mental health in young adulthood, and more likely to have both limited informal social support resources and negative perceptions of formal mental health services.

Considering these unique circumstantial and psychosocial risks to mental health and well-being in young adulthood, the child welfare field would benefit from innovative intervention development to improve mental health functioning in young adulthood by specifically addressing transition-age foster youth preparedness to manage mental health challenges, to address informal social support deficits, and to increase readiness for mental

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health help-seeking. Further, given the potential reluctance of youth with mental health needs to engage in clinical services, and the limited availability of youth-oriented mental health services in low-resource contexts, such an intervention may be most strategically positioned as an enhancement to more universally-available transition services for this population. Specifically, in the US, Independent Living (IL) services and programming for foster youth are supported by federal-level policy and funding, and typically include financial subsidies (e.g., for tuition and housing), as well as a broad patchwork of "light touch" approaches to developing life skills for young adulthood. Such community-based IL programs generally do not prioritize "soft skill" development, do not use evidence-based models (of which there are few: Greeson et al., 2020), and demonstrate limited impact on high-level transition outcomes of interest (e.g., education, employment) when rigorously evaluated (see Doucet, Greeson, & Eldeeb, 2022 for a recent review). Arguably, this service context could be leveraged and enhanced by a feasible, evaluable, and relatively brief intervention targeting key mechanisms related to psychosocial functioning and using evidence-based intervention strategies for engaging young people in programming.

The aim of the current study is to describe the initial development of an intervention program—named Strengthening Youth Networks and Coping (SYNC)—designed for older youth (ages 16-20) in foster care to target maladaptive cognitive schemas influencing coping and help-seeking intentions and behaviors. This prevention program is intended to leverage and enhance existing youth transition services to specifically target coping and help-seeking patterns as proximal mechanisms influencing mental health and overall functioning, as well as the availability of informal support resources, and service engagement during and after the transition from foster care. In this effort, we used existing evidence identifying malleable individual and interpersonal protective factors associated with mental health and overall functioning among

adolescent youth in foster care (Authors, 2020a), and are employing an iterative user-informed approach to select and pre-test our targeted proximal change mechanisms and intervention strategies, as aligned with an experimental therapeutics framework for designing and testing human services interventions (Munson et al., 2022; Raghavan et al., 2019). In this paper, we describe the initial phase of our intervention development process, present iterative formative research from pre-testing sessions with foster youth and surveys with service providers working with this population, and share our refined intervention framework along with next steps for testing. Findings are relevant to those developing and testing interventions for special populations that are intentionally designed both to successfully target key change mechanisms and to ensure new interventions can be feasibly implemented within existing systems.

2. METHODS

2.1 Study Overview

The development of SYNC to date has consisted of three phases: (a) intervention needs assessment, mechanism selection, and preliminary development, (b) pre-testing a preliminary approach, and (c) refinement of an intervention model for further testing. All study procedures were approved by the Institutional Review Board at Portland State University (IRB protocol # 196453-18, approved 8/16/2019.

2.2 Preliminary Intervention Development

2.2.1. Preliminary needs assessment. Our initial parameters for this intervention were based on prior research conceptualizing foster youth support network capacity and stability (Authors, 2015: Authors, 2018a) and barriers and facilitators to receiving support (Authors, 2018b; Authors, 2019). Overall, youth (N=22) who participated in this prior needs assessment reported that support capacity was limited by interpersonal difficulties inhibiting the presence

and supportiveness of some network members (including family, informal ties, and caseworkers), whereas network stability facilitated multidimensional support through strong and interconnected relationships with caregivers and service providers. Emergent network patterns reflected distinct subgroups of more and less functional support networks, and youth-identified strategies for support enhancement focused on developing youth skills and opportunities to invest in informal relationships, promoting youth empowerment within child welfare services and systems, and using network assessment to identify unmet support needs (Authors, 2019). Relatedly, needs assessment with service providers (Authors, 2018b) found that an innovative program to address youth psychosocial needs would be group-based, would offer exposure to peer support and "near-peer" role models with foster care experience, and would be relatively brief (e.g., 3-4 months) to allow for implementation as an enhancement to existing child welfare programming.

2.2.2 Selection of intervention mechanisms. In determining proximal mechanisms of focus for this intervention, we first conducted a scoping review to identify the range of known modifiable individual and interpersonal factors associated with psychosocial functioning among adolescents in foster care (Authors, 2020a). From this empirical review focused on two decades of research, we identified that *coping* and *help-seeking* might be promising proximal areas to target through new intervention programming (within the parameters stated above) specifically to promote enhanced support, mental health, and well-being in young adulthood. Further, both coping and help-seeking seemed likely to be uniquely influenced by foster care-related factors.

For example, Grey and colleagues (2015) showed that foster youth aged 17-21 report more psychological stress (substance abuse, depression, anxiety) when they tried to use typically-adaptive coping strategies like problem-solving and support-seeking in the absence of

relevant resources for that strategy, such as stable support providers or concrete resources to solve a problem. Although the effectiveness of such active coping strategies varies depending on context and controllability of the stressor (Folkman et al., 1991), these determinants may be especially relevant for foster youth, given unique socio-ecological barriers, such as caseworker or caregiver turnover, foster placement disruption, restrictions on family contact, or lack of normative adolescent autonomy as a ward of the court. Further, the failure of typically-adaptive coping strategies when applied in a resource-limited context may promote long-term cognitive schemas that such strategies are ineffective in general (Grey et al., 2015; Benight & Bandura, 2004), resulting in maladaptive coping in young adulthood. On the other hand, coping self-efficacy (CSE) specifically reflects one's cognitive appraisal of their ability to manage emotions and stress (Benight & Bandura, 2004; Chesney et al., 2006) and is considered a promising intervention mechanism mediating the impact of trauma and stress on adolescent functioning and well-being (DeCou et al., 2019). Thus, an intervention that addresses coping knowledge, skills, and self-efficacy (including stress appraisal and assessment of available support and resources) in the foster care context may support adaptive coping, and psychological flexibility more broadly (Kashdan & Rottenberg, 2010), for youth who lack stable family-based support, have fewer opportunities for typical vicarious learning from peers and adults around managing stress, and have limited concrete and informational resources.

Additionally, although foster youth have elevated needs, this population is often difficult to engage in ongoing treatment and more likely to have negative perspectives on informal and formal help-seeking. Research consistently confirms a broad pattern of self-protective tendencies around relationships and support-seeking, given histories of maltreatment, trauma, relational disruption, and limited agency during adolescence (Hebert et al., 2016; Hiles et al., 2013;

Lanctot, 2020; Seita et al., 2016; Salazar et al., 2011; Singer et al., 2013; Unrau et al., 2008). This helps explain what has been called "survivalist self-reliance" among young people exiting foster care (Samuels & Pryce, 2008), where a history of psychological stress paired with inadequate support presents in young adulthood as avoidant coping, even when help-seeking is perceived as a potentially effective strategy (Authors 2020b; Okpych & Courtney, 2018; Morton, 2018; Zinn et al., 2017). Importantly, this history often includes the receipt of mental health services in an under-resourced child welfare system, where youth may experience the "funneling" of this population into services or treatment without adequate needs assessment (Fedoravicius et al, 2008; McMillen et al., 2007) and often without youth's input. This likely contributes to youth perceptions of mental health services, and specifically psychotropic medication, as being reflexively "pushed" on them and not responsive to their individual lived experiences (Lee et al., 2006; Sakai et al., 2014; Villagrana & Lee, 2019; Root et al., 2018). Both youth with prior negative experiences with mental health services (Lee et al., 2006) and those with greater behavioral health risk (Munson et al., 2011) are likely to have negative attitudes towards services, and many choose self-reliance, even when recognizing their own support needs, coping difficulties, or lack of efficacy around mental health services (Sakai et al., 2014). This aligns with a theoretical framework of transition-age disengagement from mental health services, which describes cognitive mechanisms mediating service use, including beliefs about the benefits and disadvantages of services, perceived social norms, and self-efficacy related to mental health service use (Munson et al., 2012). Thus, an intervention targeting help-seeking orientation (i.e., attitudes, intentions, and behaviors) as a proximal mechanism to promote service engagement and informal support-seeking as an adaptive coping strategy may be effective in improving mental health among transition-age youth in foster care.

2.2.3 Preliminary intervention development. As noted above, our overarching goal is to design an intervention that is (1) a feasible and acceptable enhancement to existing child welfare services, and (2) addresses empirically-identified modifiable determinants related to mental health and well-being, and more specifically, limited informal support networks and mental health service disengagement. After conducting a scoping review of intervenable psychosocial factors (Authors, 2020a) and developing initial ideas, we shared our findings in a series of four two-hour meetings with a 12-member research advisory workgroup—including young adults with foster care experience, child welfare service providers, and child welfare and mental health services researchers—to select determinants most expected to be both influential and modifiable within our initial set of program parameters (i.e., group-based, relatively brief, incorporating near-peer role models). Meetings were recorded for those who could not attend a session, and member feedback was also collected in multiple ways (e.g., email, informal online surveys).

Discussions with this group resulted in prioritization of foster care-specific intervention aims that focus on increasing youth empowerment and skills to improve adaptive coping (including support-seeking) in the foster care context, and addressing cognitive help-seeking schemas as a foundational precursor to more interpersonal strategies to facilitate informal support and service engagement before and after exiting care. The prioritized youth learning objectives included promotion of (1) foster care-related empowerment and future orientation, (2) skills and self-efficacy for adaptive coping before and after exiting foster care, and (3) skills and readiness to engage in formal services and seek informal support. Thus, the preliminary SYNC model focused on promoting flexible "coping in context" by empowering youth and promoting future-oriented cognitive reframing around coping and help-seeking, increasing coping

knowledge and skills (e.g., appraising stressors, active coping) and coping self-efficacy (e.g., matching coping to resources and stressor controllability), and specifically addressing help-seeking skills, attitudes, and beliefs, to promote informal relationship development and formal service engagement as an adaptive coping strategy now and in the future.

Given these cognitive intervention aims and our desired program parameters (i.e., group-based, use of near-peer role models), we are using Social Cognitive Theory (SCT; Bandura, 1986; Bandura, 1997) to link our learning objectives with behavior change methods in ways that promote youth engagement. SCT-based intervention strategies are used to influence attitudes and beliefs, knowledge and skills, and self-efficacy related to SYNC content (e.g., *active learning*, *observational learning*), and attending to the role of youth-perceived behavior of others (*vicarious learning/experiences*) and influential social factors (*persuasion, support, and reinforcement* from peers and adults) in facilitating change. Relatedly, we have selected and adapted relevant content from a group-based curriculum called Coping Effectiveness Training (CET), which was specifically developed to increase coping self-efficacy (Chesney, Folkman, & Chambers, 1996). CET focuses on developing flexible skills for matching coping strategies to a presenting circumstance, based on appraisal of stress in terms of significance, controllability, and available personal, social, and tangible resources, and choosing whether to manage or change the problem, and/or to regulate emotional responses. CET includes group session content for topics such as stress appraisal, and how to select and use primary coping strategies (e.g., problem-focused, emotion-focused, support-seeking) (Chesney et al., 1996; King & Kennedy, 1999). We are adapting selected session content to include language and common examples relevant for youth in care, and these will comprise the bulk of the coping-specific content for SYNC.

2.2.4 Implementation context. While SYNC is a youth-focused intervention, it is important to keep in mind the broader implementation contexts that might facilitate or hinder program delivery (e.g., service provider resources, funding, priorities). The SYNC model is being specifically designed for successful implementation within Independent Living Programs (ILPs), which are universal federally-funded services delivered by public and private provider agencies to about half of the nation's foster youth (Okpych, 2015; Courtney et al., 2018). As described above, ILPs do vary by context—for example, some primarily offer a regular schedule of life skills classes, while others prioritize one-on-one skills coaching—and they have historically focused on youth employment, education, and self-sufficiency outcomes. However, federal policymakers now urge the implementation of evidence-based psychosocial interventions within this established service context to improve youth mental health and well-being (Courtney et al., 2017; USDHHS, 2012; Capacity Building Center for States, 2018). We do not expect future implementation of SYNC to be limited to ILPs, but rather are initially developing the model for this program delivery context. Benefits to this approach include the implementation of SYNC as an "add-on" psychosocial program component to address key mechanisms associated with overall youth functioning without requiring youth to first enroll in services that are perceived as more clinically-oriented; primary drawbacks (discussed further in the limitations section) include the potential for provider agencies to lack capacity to implement additional structured programming that does not directly address primary transition outcomes of interest.

It is also important to note that the model is informed by the COVID-19 pandemic, which has emphasized the urgent need for mental health-oriented interventions designed specifically for young people, given that 75% of those aged 18-24 indicate at least one pandemic-related mental or behavioral health symptom, and one-quarter reporting suicidal ideation (Czeisler et al., 2020;

Moreno et al., 2020). For example, remote strategies generally appeal to transition-age youth and young adults, and can also ensure equitable dissemination by making programming with similar peers available to underserved groups (e.g., rural youth, youth of color, LGBTQ youth; Schueller et al., 2019). Although there are known challenges to remote program delivery, there is new urgency around development of evidence-supported strategies to more successfully engage young people in remote programming, including approaches to increase access to technology and use of youth-oriented strategies such as peer support. Thus, we are developing SYNC to emphasize peer support and near-peer co-facilitation strategies, and we are developing the model to be deliverable either in-person or remotely (or a hybrid approach), as would best fit the needs and resources within each community-based implementation context.

Lastly, as noted above, there are few evidence-based programs for transition-aged foster youth (Greeson et al., 2020), and these were generally developed and tested within university research settings, followed by limited dissemination of such high-fidelity models to public and private service settings. On the other hand, in specifying an implementation context and co-developing our intervention aims and approach "from the ground up" with representatives of the potential intervention users and service providers in a specific community-based service context, there is the risk that such interventions may not be scalable to the larger context or population of interest as a whole (as well as to important subgroups of interest), or that future testing will be compromised if a research strategy is not concurrently designed as part of the intervention approach. To address these risks, we have relied on the literature to select evidence-based strategies with known measurability, we have reviewed key mechanism and outcome measures with our advisory group, we are building in processes for documenting adaptations for subgroups, and we have aimed to establish that our approach impacts key mechanisms before

quickly advancing to effectiveness testing in a range of community-based ILP settings, as outlined by experimental therapeutics design principles (e.g., Raghavan, Munson, & Le, 2019).

2.3 Pre-Testing Program Aims and Approach

2.3.1 Pre-Testing Sessions with Youth. After developing the initial intervention model, we conducted pre-testing groups with intended intervention users (i.e., older youth in foster care), adapting "theater test" methods used in marketing research to collect user feedback on a product in a single session (Wingood & DiClemente, 2008). Here, the "product" was the overall program aims and content, with selected activity demonstrations and facilitated discussion. This approach has been used to refine innovative foster youth programs, providing replicable procedures (Salazar et al., 2016; Barkan et al., 2014).

Due to COVID-19 restrictions on in-person data collection, we conducted 90-minute remote videoconferences using Zoom. Youth participants (N=30) were recruited from Oregon ILPs serving foster youth aged 16-20, and from a state advocacy organization for former foster youth aged 18-24. Due to protocol changes resulting from COVID-19, we did not collect demographic details directly from participants, and relied on state child welfare system administrative data, which was available for 27 (90%) of the participants. The average participant age is 20.07 (min=16, max=24); 66% were identified as female (33% male); 81% were identified as white, 19% as Black/African American, 11% as Alaska Native or Native American, and 15% as Hispanic (race and ethnicity categories are not exclusive).

Groups were facilitated by a research team member and near-peers (i.e., 1-2 undergraduate research interns with lived experience in foster care and mental health systems). We collected all data via anonymous online polling (included in the Zoom platform) as well as recordings of the feedback sessions. For each session, we collected a range of pre-testing data—

including brief surveys and recorded group discussion—to assess usability and feasibility in ways that directly inform refinement of the model for efficacy testing.

The strategies we are using to apply these methods are specifically effective for engaging service-involved youth and young adults. These include synchronous psychoeducational groups to deliver curriculum modules aligned with the learning objectives that are expected to impact the target mechanisms in ways that improve outcomes. Groups provide opportunities for active learning of content focused on relevant examples, allow for positive reinforcement and support from facilitators, and allow peers to engage with each other around the content based on shared lived experiences. Such group-based models have been successfully used to deliver interventions with young people with mental illness (Munson et al., 2016; Webber & Felt-Newlin, 2017) and those in foster care (Geenen et al., 2015; Phillips et al., 2015). Groups will be enhanced by near-peer co-facilitation, which has been used to increase engagement of transition-age youth involved in mental health meta-interventions (Munson et al., 2016) and foster youth with mental health challenges (Geenen et al., 2015). Near-peer facilitation allows youth to vicariously learn from a relatable role model's disclosed experiences and observable behaviors, and such role models can effectively communicate health messages when perceived by youth as a credible source (Munson et al., 2016; Munson & Jaccard, 2018; Gopalan et al., 2017). A recent meta-analysis on mentoring also found that programs using near peers were twice as effective as programs using intergenerational mentors among youth in foster care (Poon et al., 2021).

The semi-structured pre-testing sessions were designed to gather perspectives on perceived acceptability of our initial youth learning objectives (to refine our targeted intervention mechanisms and specific objectives), usability of our program delivery strategies, and additional clarity around implementation factors and considerations. Additionally, we were pre-testing

activities such as facilitated discussion and Zoom polling to examine how they might be used in remote intervention delivery. After introducing the program aims and the plan for the session, we pre-tested three primary program components or content categories, focusing on key topics and activities reflecting learning objectives within each category. These are briefly described below:

1. ***Identity and Empowerment***

   Learning objectives: Youth gain reflective insight on foster care experiences to promote empowerment and to develop future orientation.

   Activity tested: Reflection activity and narrative video, followed by a brief acceptability survey and discussion.

2. ***Coping in Context***

   Learning Objectives: Youth develop flexible coping knowledge and skills to respond to stress in different circumstances (e.g., matching coping strategies to resources).

   Activity tested: Introduction of coping strategies and narrative vignette about coping and facilitated discussion, followed by a brief acceptability survey and discussion.

3. ***Enhancing Support & Navigating Relationships***

   Learning Objectives: Youth gain knowledge and skills to accurately assess support needs and available support resources, increase awareness of help-seeking orientation, and maintain supportive relationships.

   Activity tested: A brief survey reflecting help-seeking attitudes followed by facilitated discussion, introduction to support network mapping, and brief acceptability survey and discussion.

At the end of the pre-testing sessions, youth also completed a brief program design survey (e.g., recommended age ranges, preference for online or in-person delivery, and

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prioritization of potential topics related to navigating relationships and supports). For the program design survey and 1-3 above, we collected data through a mix of Zoom polling, including dichotomous (e.g., "Is this activity something you would be interested in doing in a program like this?") and questions ("Was this content interesting and/or enjoyable? Easy to understand? Helpful and/or important?") with Likert-type response options, and more open-ended prompts and discussion. Additionally, we piloted two subscales (need for support and support seeking) from an existing validated measure (the Berlin Social Support Scales; Schulz & Schwarzer, 2003) based on the relevance of the items to our aims (and our desire to pre-test survey data collection through Zoom polling); reliability for the 9 items in this sample is good (Cronbach's *alpha* = .84). Following the sessions, poll responses were downloaded and the recordings were transcribed by two research assistants, and the research team identified salient quotes related to the topics of interest, including feedback on the presented information and activities and youth suggestions for adaptation. Each participant was compensated with a $40 gift card from one of two online retailers.

2.3.2 Provider Feedback Surveys. To collect provider feedback around intervention aims and feasibility, we distributed an anonymous online survey to targeted direct service providers, program supervisors, and state-level managers; we recruited through the Oregon Independent Living Program (ILP) and the federal list of state ILP coordinators, and encouraged forwarding to those with relevant experience. We received 82 provider responses from 15 States (34% from Oregon), with most representing direct youth service providers (52%), program supervisors/coordinators (30%), or mid-level managers (13%). Respondents worked for public (40%) or non-profit (40%) agencies serving young people, in private agencies, youth leadership/advocacy organizations, and university/educational (4% each), or other (7%).

Providers had professional experience with ILPs or related transition programming (64%) and/or child welfare casework (50%) and/or mental health services (30%), and/or personal lived experience in foster care (13%). Responses came from rural areas (27%), small cities (25%), suburban/mid-size cities (30%), and metropolitan/urban areas (18%).

Survey data were collected in January and February of 2021. We asked service providers about the perceived acceptability of our program objectives, delivery strategies, and potential implementation factors. The survey took approximately 15-30 minutes to complete and included questions about: a) Their professional role and service context, b) SYNC program aims and focus areas (e.g., coping, help-seeking), c) SYNC program strategies (e.g., online groups co-facilitated by a youth with lived experience in foster care), and d) Potential facilitators/barriers to the success of a program like this in their context. If interested, youth service providers were also directed to another link to be entered into a raffle with a 1-in-25 chance to win a $50 gift card.

Table 1 below illustrates data that were collected from providers and youth.

[Table 1]

2.4 Data analysis

Youth data and provider data were examined separately. First, quantitative analysis evaluated frequencies, means, and rankings of various program aspects to reveal areas for refinement, prioritization, and potential implementation considerations (e.g., aspects that youth find confusing or that providers deem infeasible) (see Table 1 for types of data reported here). Next, the first and third author (also the pre-testing session facilitator) used directed content analysis (Assarroudi, et al., 2018; Hsieh & Shannon, 2005) to analyze the recorded youth discussion data and the transcribed open-ended responses from providers to assess youth interest and comfort with the program components, to clarify provider perspectives on the importance

and feasibility of the model, and to identify outstanding barriers and concerns. Given that both data collection approaches were relatively directed and that the qualitative responses were specific to the question being asked, the first and third author organized these by pre-testing component or survey item. For the youth pre-testing sessions, we first examined the breadth and depth of the transcribed open-ended responses to help supplement what we learned from the closed-ended items. Next, relevant quotes directly related to the content (e.g., impressions about a specific intervention activity being discussed) were organized by the first and third author in a spreadsheet by intervention component (i.e., the pre-tested activity and related discussion), which was then summarized for reporting by the first author and reviewed by the second and third author. The open-ended survey responses were similarly organized by survey item by the first author, who initially analyzed these for summative themes and salient quotes, which were then reviewed by the first and second author. In following this directed qualitative approach, we determined that saturation had been sufficiently reached to address our specific interest in intervention development and refinement. Qualitative and quantitative findings were then examined across both reporting agents to refine the SYNC intervention framework and subsequently report the findings here. This triangulation occurred in the interpretation phase and focused on identifying points of convergence (i.e., where findings agree), complementarity (i.e., where findings offer complementary information), and dissonance (i.e., where findings may contradict each other) (O'Cathain, Murphy, & Nicholl, 2010) which informed further specification of the intervention.

3. RESULTS

This section reports findings from provider surveys and youth feedback sessions, and integrates these to illustrate how findings were used to refine the SYNC intervention framework.

3.1 Program Aims and Objectives

Overall, 85% of providers agreed that SYNC program aims (i.e., focusing on coping and help-seeking to enhance support networks and improve mental health) reflected priority objectives for new programming for youth and young adults in foster care; 8% said it did not, and 7% were not sure. We also asked providers to rate (on a low, medium, high response scale) specific youth learning objectives for the SYNC program; all of the initial learning objectives were most likely to be rated as a high priority, versus medium or low. The highest-rated was *Developing flexible coping skills and self-efficacy to respond to stress in different circumstances* (2.85 on a 3-point scale), which 87% of providers rated as high priority. The next four learning objectives had similar mean scores and percentage of respondents ranking as high: *Developing empowerment and skills for navigating services* (2.68, 69%); *Recognizing support needs and assessing who/how to ask for support* (2.68, 69%); *Navigating relationships* (2.63, 67%); and *Understanding attitudes about mental health services* (2.62, 66%). These higher-prioritized objectives fall within the Coping in Context and Enhancing Support and Navigating Relationships program components. The lowest-ranked objectives were *Understanding help-seeking attitudes* (2.52, 52%) and *Gaining future-oriented insight/reframing foster care experiences* (2.51, 52%). None of the youth learning objectives were considered a low priority by more than 4% of respondents.

The open-ended provider comments related to the overall program aims and specific learning objectives. Most commonly, providers who had rated the program aims as a top priority focused on the elevated mental health needs of this population overall, in terms of the prevalence of trauma and related distress, as well as the lack of access to mental health services for this population in many areas. As one respondent summarized, "*Mental health has always been a*

challenge for foster care youth. Any assistance in this area is needed." A few respondents also referenced the lack of youth experience and skills for accessing mental health services and supports in young adulthood. Only three providers commented on why they did not rate these overall aims as a priority, and their responses reflected the lack of relevance for their specific agency role or their perceived adequacy of programming in their context.

Provider respondents also emphasized the importance of focusing on coping and help-seeking in ways that could enhance both support systems and mental health in young adulthood. For example, providers emphasized that "*promoting help-seeking and coping behaviors is paramount"* for foster youth mental health, and that "*understanding of services, engagement in services, and relationship building are top priority,*" Others agreed that "*many foster youth are hesitant to ask for help"* and "*many lack positive coping behaviors";* more specifically, providers reflected that "*supporting their empowerment in help-seeking and coping is critical"* and "*focusing on these core skills will lead to an increase in ability to engage in services."*

3.2 Program Content

During online youth feedback sessions, activities were pre-tested with youth to better understand their thoughts about the program's approach including program strategies and which aspects were most acceptable, helpful and/or important; results are described below and in Table 2, organized within the three program components.

[Table 2 goes here]

3.2.1 Identity and Empowerment. For this component, we pretested a narrative video and a reflection activity. The brief video showed young people with foster care history discussing their experiences of challenges and empowerment in using their voice to advocate for foster youth with policy-makers, to pre-test these kinds of videos as a vicarious learning strategy.

This was designed to facilitate youth reflection on their own identity, their experiences in foster care, as well as where they see themselves in the future. We then asked youth to choose to engage in active learning by responding to one of four reflection prompts related to identity and empowerment (e.g., *What are 3-5 things that are important for someone to know about you?*), followed by polling and discussion.

Overall, youth reported positive ratings for this topic being easy to understand, interesting and/or enjoyable, or helpful and/or important (see Table 2 for mean ratings). Most reported enjoying watching the video and had positive responses (such as *"empowering," "inspiring,"* and "*relatable*"), but a few did not like the video, and one called it "*tokenizing*"; overall, 90% said we should use videos like this in our program. We were specifically interested in gauging whether it was easier for participants to do the reflection activity after watching the video: 48% said it did not matter if they saw a narrative video before they reflected on their own experiences, 26% said it helped, and 26% were not sure. Overall, 39% reported that they have not ever been in a program where this kind of topic was discussed, while 61% said that they had.

For the personal reflection portion of the activity, participants were provided four prompt options and most commonly (41%) chose to respond to one related to current interests and possible "future selves" they could imagine being in 5-10 years, followed by 26% who chose a prompt about how their experiences in foster care have contributed to who they are today. This activity generated the most in-depth youth discussion, and many shared why a particular prompt did or did not resonate with them. Lastly, several noted that videos are very effective to get youth actively engaged in learning new topics. As one remarked, "*There's a negative stigma around foster care . . . about how like we grow up and we don't do anything with our lives and we can't, like, make a difference. And I feel like seeing videos like that reminds you that you can."*

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3.2.2 Coping in Context. For this component, the facilitator pre-tested psychoeducational content with youth by explaining four primary coping methods (i.e., problem-solving, support-seeking, positive reframing, distraction) and discussing what can get in the way of using each of these strategies in different circumstances (e.g., a problem at school, an issue at home). Next, we pre-tested a narrative strategy using a vignette about a student having difficulty getting along with a math teacher, followed by a facilitated discussion of which of the previously-introduced coping strategies they might use. This activity was designed to help youth relate to a concrete example in a particular context, and also to practice brainstorming coping strategies and how to match these to the resources available to them in a particular situation.

Overall, the majority of youth rated this topic positively (see Table 2). We also asked youth to rate their confidence using coping skills: the majority felt "Somewhat confident" (68%), with less than a fifth of youth feeling "Very confident" (18%) or *"*Not very confident" (14%). A follow-up question asked about whether they have the resources and support they need to manage stress, with exactly half (50%) saying "Yes", 36% saying *"*Sometimes" and 14% saying "No.*"* Lastly, we asked which of the strategies they would want to learn more about: 34% selected "Positive reframing", followed by "Problem-solving*"*, "Support-seeking*"*, and "Distraction*"* (15% each), then "All of the above*"* (12%) and "None of the above*"* (10%).

Facilitated discussion for this topic largely revolved around which coping strategies youth had learned over time, and how some strategies can be difficult, depending on the situational context. For example, a few participants specifically mentioned hesitancy to seek support during the pandemic because they didn't want to be a burden to others. Another young person described, "*It's hard…growing up in the system and trying to find that positive outlet. . . I didn't want to accept that positive reframing yet."* Two youth suggested we use a more relatable

scenario for different age groups, and a few reflected on their experiences coping with high school stressors. For example, one young person said, *"...when I was a student and I was, you know, blowing up in classes and stuff like that...because I didn't have those tools."*

3.2.3 Enhancing Support and Navigating Relationships. To introduce this component, we designed an activity to better understand youth help-seeking attitudes and how they perceive their networks. We asked participants to complete a brief survey about support seeking attitudes (9 items from Schwarzer and Shultz, 2003; example items include *I get along best without any outside help* and *When I am worried, I reach out to someone to talk to)* to both pre-test this brief scale and introduce the topic, the mean was 2.88 (SD=0.56) on a 1-4 scale (from "strongly disagree" to "strongly agree*"*). Next, we explained that the survey items were designed to elicit attitudes about asking for support, and 73% said this is a topic they would like to learn more about. Discussion revealed that for many, this was a novel topic that helped them think about how they use support; as one participant described, *"I never thought about it like that…no one has ever asked that*" and another described this activity as, "*Eye-opening and hard. . . because I realized how shut down I am. Oh wow…I really don't reach out for anything."* (See Table 2.)

Next, one of the near-peer co-facilitators shared an example support network map (based on previous research reported in Authors, 2015, and Authors 2018a). The near-peer showed a completed map based on their own network—including names they categorized as "People I consider family*"*, "Friends", "School/Work", and "Other"— and briefly walked through how the network map was completed. Participants were then asked if they would be interested in completing this activity as part of a program like this; 58% said they would, and 12% said they would not (31% were not sure) (Table 2). Discussion revealed that overall, participants endorsed the use of the network map, but with caution. That is, for some youth, who 'was' or 'was not' in

their network is a sensitive topic. One described this as "*an emotional gray area"* and another reflected that *"sometimes it's good, sometimes it's very vulnerable."* Further, multiple young poeple reflected that emotional readiness for the network mapping activity was very important, and/or that it should be done one-on-one with someone the young person trusts, rather than completed in a group with peers, where a youth's support network could be compared to others.

Lastly, we asked youth to prioritize which of nine skill-building topics would be most interesting and important to include in a new program. Topics were grouped into categories (People Skills, Navigating Relationships, and Enhancing Support) and participants could choose 0-3 within each category. Overall, 65-81% of participants endorsed the nine topics. The most-prioritized topic was "Communication and conflict resolution" (81%), followed by "Recognizing when/what support is needed (and who/how to ask)" (77%), "Developing supportive connections with mentors and allies" (77%), "Trust and safety in relationships" (73%), and "Finding and directing support services (73%)." The least-prioritized topic, "Being more social" (65%), was still rated as important by close to two-thirds of youth. Furthermore, the vast majority prioritized a focus on relationships "with family or foster parents" (73%), "with friends, partners, or siblings" (77%), and "with caseworkers or people in helping roles" (73%).

3.2.4 Overall approach. After learning about SYNC, 100% of participating young people said they would probably want to engage in a program like this, or would have when they were younger. When asked about which age group they thought this program would be most suited for, youth were most likely to select the targeted ages of 16-17 (30%) and 18-19 (24%), followed by 14-15 (20%), 20-21 (15%), and 22-23 (11%). As one youth stated, *"this would be good at all [ages]...for the younger ones to get exposed and then the older ages to actually practice more of the activities in the real world."* Regarding the use of near-peer co-facilitation

as a strategy, 96% indicated that it was "very important" to have someone with personal foster care experience leading some of the program activities, while 4% said it was *"*somewhat important." 70% said that this is a program they would want to do with similar-age peers, while 30% said they would prefer to do it one-one-one with an Independent Living (IL) or similar transition service provider. Next, 67% said they would want this program to meet every-other-week, rather than weekly (33%). Lastly, when asked whether they would want to do this program in person or online, most (63%) said either would be good, while 30% said in person and 7% online.

3.3 Implementation and Engagement Considerations

We also gathered service provider perspectives on the benefit of a new program like this in their context, in terms of the particular local or regional resources, systemic supports, and range of services offered to youth in foster care. First, we described the primary program delivery strategies as follows:

- Group-based curriculum with 8 modules, delivered weekly or bi-weekly over 3-4 months
- Coordinated and facilitated by agency staff
- Co-facilitated by a "near-peer" young adult with lived experience in foster care
- Deliverable online or in-person

Overall, 63% said programming like this was not available in their context, 20% said that programming like this was available, and 17% were not sure. 85% said *many* or *most* agencies (53% and 29%, respectively) would be interested in offering a program like this, versus *a few* (8%) or *none* (1%), and 5% were *not sure*. Regarding perceptions of potential youth interest in the described program, 31% said *many* or *most* youth (28% and 3%, respectively) would be interested, 60% said *a few* would be interested, 4% said this was not likely and 4% were not sure.

Open-ended feedback focused on known challenges in engaging young people in this kind of programming. First, five providers reflected the potential challenges of engaging youth in group-based activities, saying for example, *"I find a lot of my youth feel intimidated by the group factor…so maybe some incentives while they warm up to it. I also think that having someone with shared experience who has seen it through is incredibly impactful."* Other providers echoed the potential importance of providing incentives early on, and relying on trusted peers and near-peers to encourage participation. Four providers noted potential hesitancy around curriculum-based groups and/or those with program staff facilitating; suggestions included all facilitators having lived experience in foster care, having staff leave the room so near-peers could facilitate some topics solo, and de-emphasizing messaging around the curriculum in favor of opportunities for "in the moment" group conversations and connection. As one provider noted, *"youth would be most excited about the opportunity to connect. Marketing groups focused on developing coping skills and navigating resources can be tricky."* Another ten people referenced engaging youth more generally, including concerns around youth interest in the mental health-oriented program topics, regardless of the potential benefit; multiple providers suggested participation incentives, including gift cards for program attendance and graduation, and for those that are interested, opportunities to co-facilitate future groups themselves.

3.3.1 Facilitators and Barriers to Implementation. Providers were also asked to select from lists of potential implementation facilitators and barriers to youth and agency participation in programming like this (see Table 3). The most-selected facilitators were youth interest in program topics (82% of respondents) and in near-peer co-facilitation (73%), the option to deliver this program online or in-person (69%), ease of facilitating a standardized group skills curriculum (52%), and provider interest in the topics (48%). Regarding potential barriers to

successful agency implementation of the model, the most-selected options were limited resources or staffing (64%), difficulty recruiting both youth (45%) and near-peer co-facilitators (45%), and competing agency priorities (29%). Open-ended responses related to successful implementation focused on capacity as a barrier and flexibility as a facilitator. A few providers mentioned being stretched thin as far as resources and staffing, and expressed that they would need additional funding to provide this, and/or would want to partner with an experienced third party to facilitate such groups. Some were focused on flexibility of program delivery (e.g., "how to administer it, who can administer it, etc.") and ability to create or customize components for youth in their context; as one noted, given the range of in-house and evidence-based programming many agencies are implementing, "*It would be important that this new program has a model that is broad enough to complement the varied models being used."* A few mentioned the importance of community partnerships, including between public and non-profit child welfare agencies, as well as with partners who can help provide technology access.

When asked about potential barriers to youth participation specifically, providers selected recruitment challenges due to limited youth interest or time conflicts (73%) and poor attendance (72%) as most likely in their context, followed by access to technology (49%), limited youth skills or readiness to participate in this kind of group program (47%), and lack of private space from which youth could attend online groups (28%). Open-ended responses related to facilitating youth participation included engagement strategies for both youth and near-peer co-facilitators. Youth attendance incentives such as gift cards were a primary suggestion, as well as keeping groups meetings relatively brief and scheduling them at a time that doesn't conflict with school or extracurriculars, providing transportation and food, and being mindful of how the program is marketed to recruit youth. Another critical component was the inclusion of near-peers with lived

experience as co-facilitators, and the need to ensure that these young adults are trained, supported, and incentivized in a way that reflects that importance; two respondents specifically discussed the time commitment the near-peers would be making and the need for adequate compensation, if not a staff position, that supports their own independent living goals.

[Table 3 goes here]

3.3.2 Remote Delivery. Lastly, we asked for feedback around remote delivery of programming like this, given that we are planning to initially test this as delivered remotely, but designing the curriculum in such a way as to allow for remote, in-person, or hybrid delivery. This was the most-responded to open-ended item in the survey, and most shared concerns around engaging youth in online programming, given that data were collected about 10 months into the COVID-19 pandemic, after most students had transitioned to online education (and for service-involved youth, remote service delivery as well). Thus, many reflected on *"*virtual burnout*"* and *"*Zoom fatigue*"* being experienced by youth and providers alike, and for many, diminishing attendance in remotely-delivered services for youth, even when incentives such as gift cards are offered.

Additionally, many had concerns around reliable computer and internet access, and privacy within their placements to participate in groups like this; as one provider noted, *"youth are pretty tech savvy, but access to tech is a big barrier*." On the other hand, a few noted that access had likely improved over the course of the pandemic with so many students learning from home, and that youth had become more accustomed to online participation. Further, many commented on the benefits of remote delivery, given the known challenges that remote options address, in terms of geography (e.g., youth in more rural areas lacking group programming and/or transportation), improved program access (e.g., for youth who with challenges such as

physical disability or social anxiety preventing in-person attendance), and opportunities for a diverse group of youth from a larger region to participate. As one respondent stated, *"in-person is great of course, but for safety reasons and potential lack of transportation, virtual may actually be easier for some youth."* A few also commented on the need for an ongoing mix of remote and in-person activities going forward post-pandemic, including strategies such as individual check-ins in addition to remote groups, developing facilitator skills and technology to deliver groups with in-person and remote attendance, and staying mindful of the need to make online components that much more "engaging, youth-led, and dynamic" to take advantage of the known benefits of remote delivery while accounting for the known barriers to engagement.

4. DISCUSSION

This paper details the intentional and iterative deployment-focused research efforts (Weisz et al., 2005) conducted with a group of youth in foster care and transition service providers to confirm the relevance of the selected intervention mechanisms for the Strengthening Youth Networks and Coping (SYNC) model. SYNC was developed to enhance existing services by targeting proximal mechanisms associated with mental health and well-being among transition-age youth in foster care. Results from the needs assessment, initial development and advisory panel feedback, and pretesting and usability testing, indicate that overall, youth in foster care, providers, and the advisory panel (1) validated the importance of addressing youth coping and help-seeking mechanisms to promote longer-term mental health and well-being, (2) helped us narrow down the focal youth learning objectives to be addressed through SYNC, (3) confirmed the acceptability of primary intervention methods and strategies, and (4) offered insights that were used to enhance the SYNC model and clarify important implementation factors to pay attention to regarding facilitators and barriers to youth participation and

engagement, future agency adoption, and flexibility in program delivery. The following discussion integrates these youth- and provider-reported perspectives in relation to the refined SYNC model.

4.1 Youth Engagement in SYNC Program Content

Our aim in pre-testing selected content with youth was to assess initial response to the primary program topics and related example activities (using specific SCT intervention strategies), as well as to understand whether these topics reflected familiar content they had been exposed to through existing programs, and whether they would be interested in participating in a program like this if it were available. Overall, youth reported relatively high ratings for activities being easy to understand and that topics were important as well as interesting/enjoyable. The average ratings reflecting interest and/or enjoyment were slightly lower than means for importance and ease of understanding, and youth's qualitative responses helped in interpreting this distinction; that is, youth described some topics being important to learn about, even if these might be sensitive or difficult to reflect upon for some youth.

The *Identity and Empowerment* content generated the richest youth engagement and discussion during pre-testing. Youth appeared to want to understand themselves and their foster care experiences, and seemed to appreciate a focus on their future selves. Feedback reflected that youth liked having the option to choose a reflection prompt that most resonated with them (and further, to choose not to respond to a prompt that was sensitive or difficult for them), which is a strategy that will be used in the final curriculum wherever possible. Additionally, youth ratings and discussion confirmed the expected importance of using near-peer role models as a vicarious learning strategy for foster youth, not just through the use of near-peer co-facilitation, but also through narrative videos featuring relatable role models with shared lived experience in care.

Further, youth response to these learning and reflection activities suggests that our identity and empowerment focus up front may be an effective strategy to engage youth in reflective strengths-based and future-oriented cognitive reframing, which sets the stage for moving move towards the learning objectives focused on influencing the proximal intervention mechanisms related to coping and help-seeking cognitions. This strength-based focus on future orientation amplifies youth's future options and possibilities and perhaps empowers youth to see themselves outside of the negative stigma they feel is often attached to them as youth in foster care.

The *Coping in Context* section more directly addressed the targeted mechanisms and reflects the area most highly prioritized by youth and providers. Overall, self-efficacy around coping was described as developmentally important by both youth and providers. Youth pre-testing session participants were generally at or above the older end of the age range (16-20) we are designing this program for, and participants specifically discussed learning new coping skills as teenagers and young adults and subsequently gaining self-efficacy over time. Importantly, many saw the value of being able to identify coping strategies and available resources and to match which strategy they should select based on the given context. Some youth reflected that they had not thought about developing coping efficacy in this way before, with coping strategies being something that you can gain both skills and confidence around using with practice and reflection, and some participants discussed the challenges with having to learn this over time "the hard way" as they managed difficult experiences.

Lastly, findings from the pretesting of preliminary SYNC topics and activities related to *Enhancing Support and Navigating Relationships* suggest that this program content may be relevant in intervention to influence youth help-seeking attitudes and behaviors. Overall, youth participants prioritized building help-seeking skills, specifically related to developing skills to

improve relationships with important people, developing new relationships with allies and mentors, and skills for recognizing support needs and asking for support. Youth found the pre-tested survey items about social support-seeking beliefs and attitudes to be novel and interesting to consider, and a few explicitly expressed that this content led to personal reflection on these factors as influencing their own support-seeking behaviors; this suggests that these may be fruitful curriculum topics that can be influenced (and measured) through this new intervention. In terms of using a support network mapping as an intervention activity to encourage assessment of their own support network capacity, this was a sensitive activity for some, and generated the most caution on the part of the youth pre-testers, who suggested that this activity should not be done in a group setting where youth can compare their network maps with peers. Rather, this finding indicates that this sort of potentially sensitive activity may best be done as a one-on-one activity with a facilitator, rather than in a group setting. This finding also helps us refine timing of the activity, suggesting that it needs to come later in the program after rapport and trust are established (versus an activity that youth would do early on to generate ideas for what relationships you might "work on" in a program like this).

Findings overall confirm the benefit of designing intentional, data-informed programs like the SYNC program. SYNC is focused on developing youth's individual and interpersonal skills and self-efficacy as internal assets that would facilitate the success of more direct intervention targeting youth support network size or relationship quality.

4.2 Provider Endorsement of SYNC Aims and Objectives

Overall, the vast majority of providers endorsed the importance of developing a new program for youth in foster care focused on coping and help-seeking, in an effort to improve longer-term behaviors that support mental health in young adulthood. More specifically, all of

the youth learning objectives were ranked as high priority by the majority of the respondents. Importantly, the three highest-ranked youth learning objectives were related to our primary intervention mechanisms around skills and self-efficacy for coping and help-seeking. Even learning objectives that were not prioritized as highly (i.e., understanding attitudes about help-seeking in general, and understanding attitudes about mental health services) will theoretically be associated with help-seeking attitudes and behaviors; however, we believe that these topics may be better understood as aspects of more familiar phenomena we are addressing through SYNC (e.g., help-seeking skills and self-efficacy), and may not need to be explicitly identified as youth learning objectives in this program. Additionally, there was convergence between the quantitative ratings and open-ended provider responses reflecting clear endorsement of our program focus as relevant to common challenges they observe youth struggling with in practice.

Furthermore, the majority of providers also indicated that programming like this was not already available in their service context, and that many or most agencies would be interested in either providing such a program or otherwise having it available to youth in their local or regional service area. They also indicated that agency implementation would be facilitated by provider perception of the program aims and content as being a relevant enhancement to existing services for youth in foster care. Additionally, providers felt that implementation of a program like this would be most facilitated by youth interest in the topics and engagement with near-peer co-facilitation, which was echoed by youth pre-testing findings suggesting the same, as discussed below. Additional important facilitators were flexibility, in terms of agencies having the option for remote or in-person delivery (depending on what worked best for youth and providers in their context), as well as the availability of a standardized but customizable curriculum that agencies to easily adopt and facilitate. Primary provider concerns were related to potential agency

challenges around capacity for delivering and staffing such a program, as well as expected challenges in successfully recruiting near-peer facilitators and engaging youth in the program strategies (e.g., group-based, remotely-delivered programming), as discussed further below.

4.3 Enhancing Youth Engagement

Program engagement and retention are expected challenges with transition-age youth in general (Kim et al., 2012) and with remote delivery as well (Hanna et al., 2014; Murray et al., 2009; Watson et al., 2018). Despite the fact that the youth participants here indicated openness to remote or in-person SYNC delivery, the shift to remote programming during the Covid-19 pandemic has demonstrated that attendance and engagement are a particular challenge. Further, although youth indicated interest in SYNC overall and in the specific program topics, we recognize that concerns about youth engagement in a mental health-oriented program like this is a critical implementation factor. Additionally, providers specifically rated youth interest as a top implementation facilitator and lack of youth interest as a top barrier, and thus enhancing our approach to youth engagement is a focal area we continue to refine in a number of ways.

First, we are adopting the common suggestion from providers to use incentives (e.g., a $20 gift card) to pique youth interest in this program and increase program attendance over time. Next, based on provider feedback around youth recruitment challenges, we have worked with our research advisory group to develop language for promoting and marketing this program that engages youth and highlights the transferability of knowledge and skills covered in the program. Additionally, we are co-creating the curriculum with consultants at Foster Club, a nationally-known leadership and advocacy organization for youth in foster care with special expertise in youth-driven and near-peer delivered programming; this effort includes refining language used throughout the program to make program sessions and activities youth-friendly and engaging.

We have also developed additional ways to increase youth's interest in specific program sessions and activities, as described above, including using relatable narrative videos and vignettes throughout, making structured curriculum content as interactive and individualized as possible, and following the recommendation to not include support network mapping as a group activity.

Additionally, based on youth and provider feedback around the importance of including relatable near-peers as co-facilitators and role models who can share their lived experiences with youth participants, we are considering this a fundamental program delivery strategy and focusing more on how we can enhance the near-peer role. This includes building in specific activities to be facilitated by near-peers, creating opportunities for the provider staff facilitator to leave the room while the near-peer facilitates discussion or activities, and creating a path for participants who finished the program to become near-peer co-facilitators themselves. Importantly, we are also introducing near-peer engagement strategies outside of the synchronous group format. Although agency recruitment, training, and support for near-peer mentors can be a programming challenge (as highlighted by the provider feedback), it is also linked with consistent benefits (e.g., Poon et al., 2021) and has been used successfully in programming with youth in foster care experiencing mental health stressors (Geenen et al., 2015). In addition to near-peer co-facilitation as a necessary component of program delivery, our planned near-peer engagement strategies include initial recruitment outreach to youth and weekly text reminders about attending upcoming SYNC sessions. Additionally, as we further develop the model, we are calibrating an enhanced strategy of direct participant support when initiated by an individual youth or in response to youth-identified challenges impacting program attendance, where near-peer direct support and problem-solving (e.g., individual check-ins and referral to more formal youth service providers as needed) may increase program engagement and retention. This approach is

informed by findings from Munson's meta-intervention for young people initiating mental health services (Munson et al., 2016; Narendorf et al., 2020), given potential similarities in participant interest in working with near-peers beyond the scope of the intervention as currently designed.

Lastly, we pre-tested this program remotely due to pandemic restrictions and with recognition of the corollary emergent need for remotely-delivered programming, which we see as closely intertwined with equitable youth engagement; for example, remote delivery may increase engagement for a rural youth with few transportation options but ready access to technology, where another youth may have transportation and a preference for in-person groups. Our intention is to make this program easy to deliver in whichever mode best suits the needs and preferences of youth and providers in a given context (i.e., remote, in-person, or a hybrid model). This includes, for example, creating intervention materials and facilitation protocols that allow for remote or in-person delivery with reasonable equivalence, while making sure that program activities are not overly structured and are consistently dynamic, interactive, and engaging, whether provided in person or online. Additionally, whether delivered remotely or online, session content (e.g., videos, slides, worksheets) strategically include youth-friendly elements (e.g., popular memes of GIFs) and materials will be available through an asynchronous platform with secure group access (e.g., Google Drive). Standardized materials will also accommodate adaptations for specific groups or settings (e.g., recommendations that near-peer facilitators share racial or cultural identity with youth in culturally-specific settings, or that delivery in rural settings account for potentially limited mental health service availability).

4.4 Refined SYNC Intervention Model and Next Steps

Based on the results from pre-testing with youth and providers and consultation with our advisory group, we have refined the SYNC program model (see Figure 1). This refined model

incorporates findings to date and illustrates SYNC program strategies for social-cognitive change, youth learning objectives, targeted proximal change mechanisms, as well as a broad set youth outcome domains. Based on our findings, refinements have been made to strengthen the SYNC program. For example, we were initially planning to have this program consist of eight sessions and the refined program now consists of ten sessions. These additional sessions will also allow for semi-structured session time for participants to connect with each other and with near-peers, and to provide ample practice time for youth to develop and practice skills during sessions. We have also incorporated unstructured and semi-structured activities between sessions (e.g., completing the support network map activity) to continue to build and strengthen developing youth skill sets. We have clarified our focus on three primary youth learning objectives, honed on in specific sub-objectives within these, and refined the target mechanisms. This refined SYNC intervention model will be further tested to confirm that it both engages the intended proximal mechanisms and that these are associated with youth outcomes; if so, we will conduct robust effectiveness testing in the ILP context. This iterative development approach has the potential to result in highly utilized and effective intervention.

[Figure 1 goes here]

4.5 Limitations and Future Directions

There are a few key limitations that are important to acknowledge. First, the sample size for youth was smaller than intended, while the service provider sample size was larger and spanned a wider geographic area, and these results may not be representative of youth in foster care or the providers who serve them. Additionally, although the youth participant sample is reflective of the racial and ethnic demographics of the area where this research was conducted, the sample is predominantly white, and reported demographic data reflects potentially-inaccurate

administrative records, rather than youth-identified characteristics (e.g., being able to self-identify one's gender as non-binary). This was due to a decision not to collect detailed demographic data directly from youth, to reduce participant burden (and increase privacy) during a time period (summer and fall of 2020) when young people were experiencing the initial and acute impact of the COVID-19 pandemic. Relatedly, we do not know the demographic characteristics of the service provider sample. Further, both were convenience samples that may reflect selection bias and exclude important perspectives. Future development and testing of the SYNC model will require careful consideration of the sample characteristics and aspects of the model that can and should be adaptable for different groups of youth in foster care (e.g., culturally-specific, LGBTQ) and service settings (e.g., rural areas).

Next, the pandemic is an important consideration when developing and delivering programming; however, conducting this study during COVID-19 required protocol adjustments and restricted how data were collected (via Zoom) which may have influenced participation and/or results. Additionally, while we gathered quantitative and qualitative data across reporting agents and findings appear to be complementary, other researchers may have interpreted findings differently and/or reached other conclusions. Relatedly, our intention with the qualitative analysis was to inform refinement of the intervention model, and we did not examine the data for other potential findings related to foster youth more broadly, for example.

Lastly, we recognize the potential benefits and drawbacks of situating our intervention within the ILP context for developing and testing. Our assessment of benefits includes the potential for youth to be open to engaging in psychosocial programming that is not accessed through the mental health service system, for typical ILP staff to serve as group facilitators (given that ILPs may already include some degree of group skill-building activities), for youth to

"graduate" into co-facilitator roles while continuing to access ILP, and for ILP-enrolled youth to be more easily recruited to into the SYNC program. On the other hand, as described herein, this kind of programming may be unfamiliar to ILP staff focusing on "hard skills", young people may not be interested in accessing such programming through their ILP, and ILP may be an inherently limited resource context with overburdened staff (which likely contributes to the kind of light touch services associated with ILP); as suggested by some providers, staff burden may be a barrier to implementation, and ILP administrators may prefer such services be offered to the youth they serve by an outside entity. Such challenges will be key indicators in ongoing development and testing of SYNC, and one of the benefits of the iterative approach undertaken here is the potential to make strategic changes to design and implementation in early stages, to allow for scalability when the model is more refined for fully-powered effectiveness testing.

Future research should continue to share detailed steps focused on the development and testing of interventions, particularly those designed for priority populations (e.g., youth in foster care) and/or those that ideally will operate within existing service systems, as these approaches may be best-positioned to lead to scalable evidence-based interventions. Importantly, this includes the careful selection of targeted proximal intervention mechanisms, as well as iterative testing of impact on these intermediate mechanisms and association with longer-term outcomes, and documentation of enhancements and adaptations for settings and subgroups of interest. Future research should also examine longer-term impacts via longitudinal studies and specifically test factors influencing successful and impactful implementation. Lastly, future research endeavors should explore the relationships and collaboration required to make the implementation of these types of programming enhancements more streamlined within existing service systems.

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4.6 Conclusion

The child welfare service array includes few evidence-based models designed specifically for transition-age foster youth or that target mental health, and many youth perceive the mental health services that are available to be solely therapeutic and therefore disengaging. This study aimed to initially design a feasible and youth-friendly intervention to address coping and help-seeking, given that young people in general, and foster youth specifically, can be hard to engage in typical mental health services. Results pinpointed areas to further enhance prior to more robust testing of this intervention. This paper provides an important example of how we can advance the science of intervention development and testing within complex service systems, as this level of detail is necessary for applied researchers and practitioners focused on developing interventions designed for priority populations to ensure they are targeting influential mechanisms and delivering programming in a way that works for the participants and the larger system context.

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TABLES AND FIGURES

Table 1.

Pre-testing Data on Program Model Collected from Youth and Providers

Preliminary SYNC Program	Youth Pretesting Feedback	Provider Survey Feedback
Program Aims and Content	• Acceptability of program content: – Easy to understand – Interesting/Enjoyable – Helpful/Important • Prioritized topics/subtopics • Current skills/resources/supports	• Perceived benefit to youth • Perceived youth interest • Prioritized topics/subtopics
Implementation and Engagement	• Ages of youth participants • Length of program • Delivery format (e.g., in person or remote, group or one-on-one) • Near-peer co-facilitation	• Youth interest, readiness, and availability for this kind of programming • Youth access to transportation and/or technology and private space • Provider interest in/access to this kind of program • Provider resources, staffing, and competing priorities • Provider capacity to recruit youth and/or near-peer co-facilitators

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Table 2.

Youth Perceptions Related to Primary SYNC Program Content

Activities for this topic were…	**Identity and Empowerment** M (SD)*	**Coping in Context** M (SD)*	**Enhancing Support and Navigating Relationships**
Easy to understand	3.71 (0.52)	3.63 (0.62)	• 73% want to learn more about help-seeking attitudes • 65-81% want to learn more about Enhancing Relationship topics
Interesting and/or enjoyable	3.07 (0.80)	3.22 (0.74)	
Helpful and/or important	3.46 (0.63)	3.37 (0.62)	
Skills, Resources and Supports			
Confidence in Coping Skills	14.29% (Not Very)	67.86% (Somewhat)	17.86% (Very)
Confidence in Stress Management Resources/ Support	14.29% (No)	35.71% (Sometimes)	50.00% (Yes)

* Responses on a 1-4 scale (*No, sort of, mostly, yes*).

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Table 3.

Provider Perceptions of Potential Implementation Facilitations and Barriers

Potential implementation Facilitators and Barriers		Percentage
Provider Implementation Facilitators	Youth interest in program topics	82%
	Near-peer co-facilitation	73%
	Option to delivery online or in person	52%
	Provider interest in topics	48%
Provider Implementation Barriers	Limited resources and staffing	64%
	Difficulty recruiting youth	45%
	Recruiting near-peer co-facilitators	45%
	Competition with existing agency priorities	29%
Barriers to Youth Participation	Limited youth interest or time conflicts	73%
	Poor attendance	72%
	Access to technology	49%
	Limited youth skills or readiness to participate in this kind of group	28%
	Lack of private space in placement from which to attend online groups	28%

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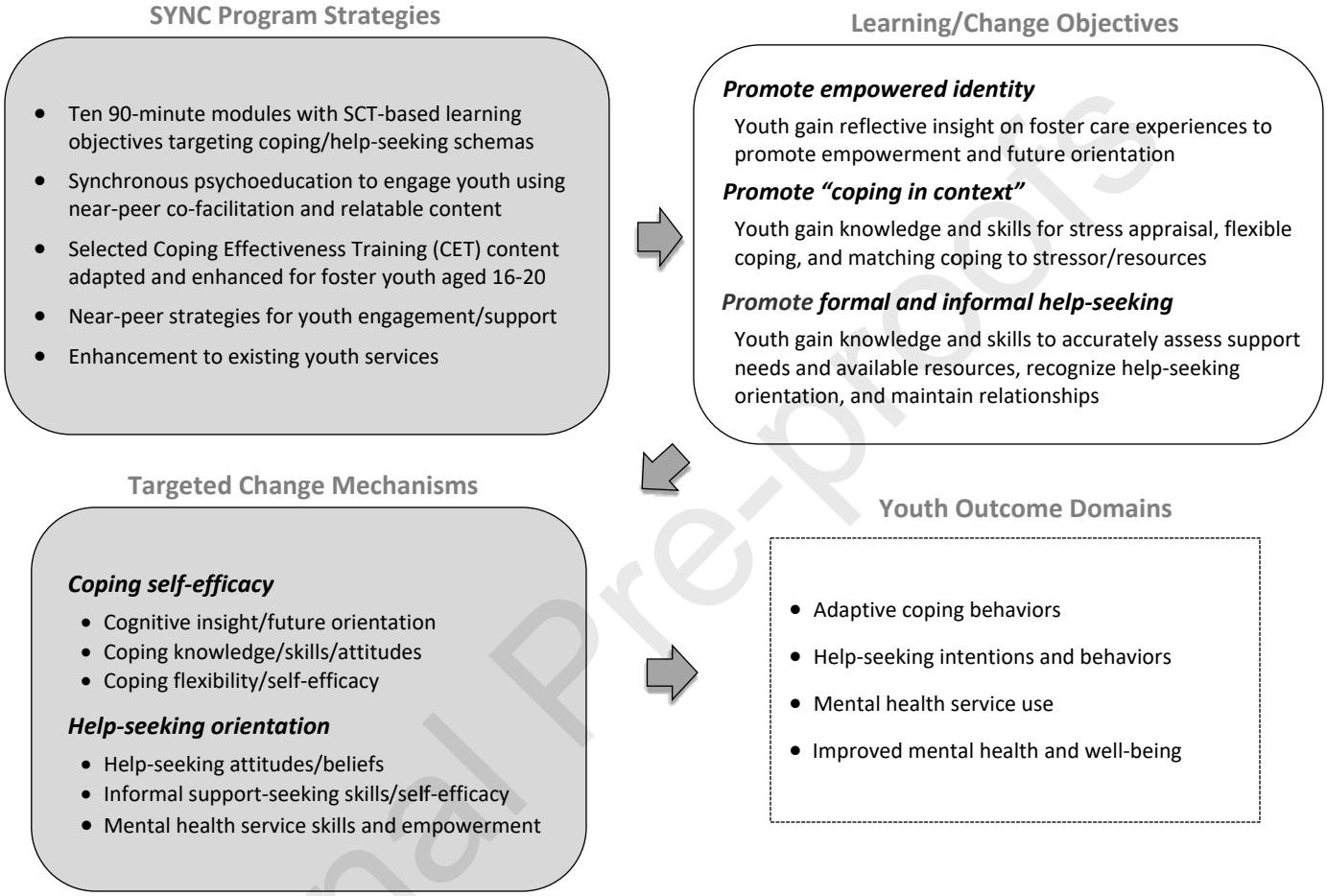
Figure 2.

Refined SYNC Intervention Model for Efficacy Testing



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Author Statement

Jennifer Blakeslee: Conceptualization; Methodology; Formal analysis; Investigation; Project administration; Funding acquisition; Writing – Original Draft. **Brianne Kothari:** Conceptualization; Methodology; Formal analysis; Investigation; Funding acquisition; Writing – Review & Editing. **Rebecca Miller:** Conceptualization; Methodology; Formal analysis; Investigation; Data curation; Writing – Review & Editing.

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Highlights

- Describes the development of a new intervention for transition-age foster youth
- Model focuses on improving coping self-efficacy and help-seeking orientation
- Model is designed for implementation within Independent Living (IL) programs
- Iterative approach includes pre-testing of initial program aims and strategies
- Next steps will evaluate impact on key mechanisms prior to effectiveness testing

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