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SENSE OF COMMUNITY AND PARTICIPANT ENGAGEMENT IN A GROUP-BASED PARENTING INTERVENTION

by

CATHERINE ANN LESESNE

Under the Direction of Gabriel Kuperminc

ABSTRACT

This study examined sense of community (SOC) and participant engagement in the first 12 months of a longitudinal, group-based intervention program for parents, Legacy for Children™. Previous research in self-help/mutual support groups and alternative living environments for recovering addicts suggested SOC may positively influence engagement in programs and may be an active ingredient to the success of such programs. Literature on SOC has been limited by cross-sectional investigations and lacked a developmental perspective of changes in SOC over time. This study examined the following questions: 1) Does SOC with the parenting program differ between intervention and control participants at 6 months and 12 months following entry into Legacy? 2) How do baseline levels of social support, stress, and self-efficacy relate to sense of community with the parenting program? 3) Do intervention participants' baseline demographic and psychological characteristics relate to attendance and engagement in the first 20 weeks of parent groups? 4) Does participant engagement predict SOC with the parenting program over time? Does early SOC predict later

engagement? Study hypotheses were examined using repeated measures ANOVA, hierarchical linear regression, and structural equation modeling. The sample included 289 mothers recruited at the Miami Legacy for Children intervention site; eligible mothers were adults, received Medicaid, were English speaking, and had a newborn child. Mothers were randomly assigned to the intervention or control group. Results of the structural model using only intervention participants suggest that attendance and engagement in parent groups contributed significantly and positively to sense of community with the program over time. The intervention group had a slightly higher SOC with the program than the control group. However, levels of SOC with the program declined from 6 to 12 months among intervention participants while stability or slight increases in SOC characterized the control participants' SOC during this time. Regardless of experimental condition, changes in SOC within the first year of the program were small in magnitude and suggest that changes in SOC between groups may take more time to evaluate fully. Implications of these findings to the development of SOC in intervention settings are discussed.

INDEX WORDS: Sense of Community, Parenting Intervention, Child Development, Maternal Self-efficacy, Structural Equation Modeling, "Legacy for Children™"

SENSE OF COMMUNITY AND PARTICIPANT ENGAGEMENT IN A GROUP-BASED PARENTING INTERVENTION

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CATHERINE ANN LESESNE

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy
Georgia State University

2005

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by

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May 2005

Dedication Page

This dissertation is dedicated to those who have provided me endless love, support, and encouragement both personally and professionally. Personally, without the support of my partner, Brandi E. Rainey; my parents, Peggy G. Nunn and John T. Nunn; and my favorite grandmother, Ann Gilchrist, this dissertation would not have been possible. I also dedicate this research to Jean Ann Linney, whose friendship and guidance led me to community psychology and whose leadership, character, and contributions to the field have inspired me. Last but not at all least, I dedicate this work to my friend, Phyllis Holditch "that's right" Niolon, for giving freely of her time, providing endless rounds of feedback, and reminding me often that we "can do this." Without our working in tandem, I doubt this would have been accomplished on our "crazy timeline". Thank you, Phyl.

This dissertation is also dedicated in loving memory to William Marshall Lesesne and Thomas Frederick Lesesne. Although their lives were too short to witness this accomplishment, they would have been exceedingly proud.

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List of Abbreviations

GSE:	General Self-Efficacy
Legacy, LFC:	Legacy for Children
MSE:	Maternal Self-Efficacy
PSI:	Parenting Stress Index, Competence Subscale
SEM:	Structural Equation Modeling
SOC:	Sense of Community
SCI:	Sense of Community Index
SS:	Social Support Satisfaction
FSSQ:	Duke Functional Social Support Questionnaire

CHAPTER 1:

Introduction

What keeps participants engaged in long-term community-based intervention or prevention programs? What individual and program-related factors affect rates of participation, attendance, and attrition in programs designed to reduce conditions of risk or improve psychological and health outcomes? Despite their critical relevance to the success or failure of intervention programs, these questions have too often not been the focus of empirical research, with some notable exceptions (e.g., Armistead, Clark, Barber, Dorsey, Hughley, Favors, & Wyckoff, 2004; Luke, Roberts, & Rappaport, 1993; Spoth & Redmond, 1993; Spoth & Redmond, 1995; Spoth, Redmond, Haggerty, & Ward, 1995). Too often investigators cannot describe the critical factors associated with the success or failure of their interventions. It is plausible that sense of community (McMillan & Chavis, 1986), feelings of connection with a program, and the experience of embeddedness in a supportive network of peer participants may contribute to the likelihood of participants' remaining engaged in a program over time. Research on sense of community in self-help and mutual support groups suggest that sense of community is a critical facet to the success of these groups (Bishop, Chertok, & Jason, 1997; Laudet, Cleland, Magura, Vogel, & Knight, 2004; Magura, Laudet, Mahmood, Rosenblum, Vogel, & Knight, 2003; Sanchez & Ferrari, 2005).

Quantitatively capturing what interventions provide in terms of community, connection, and support is difficult both in terms of measurement and methodology. But such efforts are necessary in order to fully evaluate the effects of program format, setting, and goals on achieving intervention outcomes. In addition, understanding these facets of programs may inform how participants' experience of a program and the personal value of

these experiences such that intervention format can be revised or adjusted to optimize program participation.

Within interventions that operate in group formats or allow for strong connections between program participants, one factor that may greatly contribute to the level of participation and engagement with the program is individual-level perceptions of membership, connection, and commonality with the program staff and with other participants. Evaluations of several large-scale interventions, although not evaluated for these specific factors, have noted qualitatively or anecdotally that key leaders or strong project directors and staff may explain why a program succeeded in one place but failed in another (St. Pierre, Layzer, Goodson, & Berstein, 1998). In addition, a meta-analysis of family support programs noted those programs creating socially supportive environments for parents and families had larger program effects than individualized approaches (Layzer, Goodson, Berstein, & Price, 2001), but data to explain how or why these factors may be important is lacking particularly for preventive interventions where participants are recruited for risk rather than for the presence of a condition or problem behavior.

Spoth and colleagues' extensive work has shed some light on factors associated with recruitment (Spoth & Redmond, 1993, 1994), retention (Spoth & Redmond, 1995), attrition (Spoth, Goldberg, & Redmond, 1999) and participation in prevention-oriented parent skills training programs (Spoth, Redmond, Haggerty, & Ward, 1995). These studies have demonstrated a relation among recruited and enrolled participants' socioeconomic status, gender, education levels, and perceived susceptibility of risks that influence participation and retention in community-based prevention programs. Although these factors' relevance to intervention design and evaluation will be discussed in later sections, Spoth and colleagues

have not examined factors *within* the intervention program or delivery that may influence levels of participation. None-the-less, factors both extrinsic and intrinsic to intervention programs likely have meaningful effects on decisions to consent to a prevention program and later, to attend or engage in a program. Factors *within* an intervention program may substantially contribute to participant satisfaction with and commitment to intervention programs. Ultimately, the convergence of many of these processes can affect the dose of intervention participants are willing to receive.

Understanding specific group and individual processes operating in community-level intervention programs may be a critical beginning to refining and evaluating the success of intervention program delivery in real world settings. Ideally, researchers may find opportunities to improve or adapt their programs to facilitate optimal participation and thereby implement intervention programs as fully as they were intended. One construct that may help explain how and why individuals do or do not engage fully in intervention programs is "sense of community" (Chavis & Newbrough, 1986; McMillan & Chavis, 1986; Perkins, Florin, Rich, Wandersman, & Chavis, 1990; Sarason, 1974). Sense of community has been defined in different ways but definitions have consistently emphasized the aspects of individual to aggregate-level experience and the effects of connections within communities of interest. Necessarily, the theoretical and epistemological aspects of sense of community become more complex as different levels of operation and analysis are considered in isolation and/or synergistically, e.g. the individual, group, or systems levels (Bess, Fisher, Sonn, & Bishop, 2002; Hill, 1996). Despite these analytic challenges, mechanisms for creating a sense of community play a central role in theory and practice in community psychology and the empirical base on the construct continues to grow.

However, the relevance of sense of community in the conception and delivery of community-based intervention programs has been under-studied. Limited research in the area of mutual aid support groups for those previously addicted to substances (Bishop, Chertok, & Jason, 1997; Ferrari, Jason, Olson, Davis, & Alvarez, 2002; Laudet, Cleland, Magura, Vogel, & Knight, 2004; Magura, Laudet, Mahmood, Rosenblum, Vogel, & Knight, 2003), welfare-to-work learning centers (Brodsky & Marx, 2001), and learning communities such as public schools (Bateman, 2002; Royal & Rossi, 1996) all suggest that sense of community may have a unique role in accomplishing the goals inherent in these various settings. As such, it stands to reason that sense of community may also be relevant in group-based, longitudinal intervention programs regardless of program administrators' efforts to encourage it or decision to ignore it.

This study builds on both the intervention programming and sense of community literatures by evaluating the relation between sense of community and level of engagement among mothers participating in a longitudinal, controlled trial of a parenting intervention to prevent developmental problems among children born into conditions of risk (Legacy for Children™). Previous efforts to examine sense of community have been stifled by cross-sectional, non-experimental research designs. This study offers the first known exploration of the development of sense of community over time within the same sample, in the context of a preventive intervention program, and among both control and intervention participants. Additionally, predictors of both sense of community and levels of engagement with the intervention program in Year 1 (among intervention group) are presented.

CHAPTER 2:

Literature Review

Theoretical and empirical research has attempted to clarify the ways in which individuals experience a sense of community (Chavis, Hogge, McMillan, & Wandersman, 1986; Chavis & Newbrough, 1986; Chavis & Wandersman, 1990; Fisher, Sonn, & Bishop, 2002; McMillan & Chavis, 1986; Perkins, Florin, Rich, Wandersman, & Chavis, 1990; Sarason, 1974). Most research has examined the communal experience of existing within geographical communities such as one's neighborhood, (e.g., Perkins, Florin, Rich, Wandersman, & Chavis, 1990; Chavis & Wandersman, 1990), although more recent efforts have examined relationally-based communities such as the workplace (e.g., Chipuer & Pretty, 1999; McCarthy, Pretty & Catano, 1990; Pretty & McCarthy, 1991; Pretty, McCarthy, & Catano, 1992), public schools (e.g., Bateman, 2002; Royal & Rossi, 1996), and virtual (internet) interest groups (e.g., Obst, Zinkiewicz, & Smith, 2002a,b; Obst, Smith, & Zinkiewicz, 2002). Although research on sense of community as an experience and a construct continues to grow (Fisher, Sonn, & Bishop, 2002; Garcia, Giuliani, & Wiesenfeld, 1999; Loomis, Dockett, & Brodsky, 2004; Obst & White, 2004), many empirical questions remain about its nature. Particularly, research continues to develop in ways that aid in understanding sense of community at individual and collective levels (Brodsky, O'Campo, & Aronson, 1999), its relation to inter- and intrapersonal psychological characteristics (Lounsbury, Loveland, & Gibson, 2003), and, ultimately, its potential value in applied settings (Sanchez & Ferrari, 2005).

Limited research has examined changes in an individual's perceived sense of community over time, within multiple referent communities, or within the context of a

research intervention. Much of the research on sense of community has been cross-sectional investigation of the correlates of sense of community; or the psychological or environmental factors that predicted or were predicted by sense of community. Consequently, little is known about the longitudinal life of one's sense of community within and compared to multiple communities of relevance.

As previously noted defining 'community' is an arduous task in the best of circumstances and consequently so is defining a 'sense of community'. One conceptualization of community is offered by Nisbet (1953):

> Community is the product of people working together on problems, of autonomous collective fulfillment of internal objectives, and of the experience of living under code of authority which have been set in large degree by the persons involved . . . everything that removes a group from the performance of or involvement in its own government can hardly help but weaken the sense of community. (p. xvi)

In addition, Sarason's work generated great interest and thirst among community psychologists to understand and conceptualize community in terms of an individual's perceptions of and experiences in communal contexts. His 1974 book termed the phrase, "psychological sense of community," setting in motion both theoretical and research interest in understanding the importance of this phenomena. Sarason (1974) describes psychological sense of community as "…the sense that one is part of a readily available, mutually supportive network of relationships upon which one could depend and as a result of which one did not experience sustained feelings of loneliness…" (p.1).

In a recent chapter on psychological sense of community, Bess, Fisher, Sonn, and Bishop (2002) describe how sense of community can be conceptualized in several ways that extend those posited by Sarason. The authors contend that sense of community can be understood as an end state, a process, a moderator, or mediator of psychological experiences

in communal contexts. Perhaps it can also be conceptualized in new and creative ways when sense of community is considered simultaneously at various levels of operation, e.g. individual, community, or systems levels. Regardless, whether sense of community is treated as a process, an outcome, mediator, or moderator as described by Bess and colleagues (2002); a "product" as described by Nisbet (1953); or a "psychological sense" as described by Sarason (1974); measuring and understanding the construct of sense of community is clearly complex. McMillan and Chavis (1986) developed one of the first measurable theoretical frameworks for perceived sense of community. Following Sarason's work, these authors defined the construct as one's "Psychological Sense of Community." McMillan and Chavis' operational definition focuses specifically on individuals' experience of their community and recognizes that this experience may be conceptualized and perceived differently from person to person and from context to context. However, these earlier writings focused largely on sense of community (hereafter, SOC) within a neighborhood setting and generally focused on how this related to community participation and other characteristics of neighborhood.

Based on this work in a neighborhood context, McMillan and Chavis theorized and then evaluated a model of SOC positing four core dimensions to the construct: 1) feelings of membership and belonging to the group; 2) experiences of bi-directional influence within the group; 3) experiences demonstrating needs reinforcement; and 4) a shared emotional connection to others in the group. Feelings of membership and belonging to the group can be thought of as how much an individual identifies as a member of the group and feels they belong to the group. Experiences of bi-directional influences within the group setting means how much the individual feels they influence the group (e.g. decisions, behavior, direction)

and that they also feel the group influences them. The third dimension of SOC refers to how much an individual feels that their needs are being met by the group and by being part of the group a collective or common need is also met. Lastly, the fourth dimension is how much an individual feels an emotional connection to others in the group. The four dimensions of SOC and their development are described in further detail by McMillan and Chavis (1986) and by Chavis, Hogge, McMillan, and Wandersman (1986). Subsequent research has challenged the presence of all four dimensions or posited new dimensions may better describe SOC (Chipuer & Pretty, 1999; Obst, Zinkiewicz, & Smith, 2002a, 2002b; Rapley & Pretty, 1999). However, the field overwhelmingly continues to use the McMillan & Chavis (1986) theoretical framework as the basis for further investigation and/or adaptation of measures and theoretical contributions.

Sense of Community in Geographic Settings

Much of the formative research on SOC focused on the experience of connection to one's neighborhood of residence. Research within neighborhoods and residential blocks has demonstrated positive links between SOC and such behaviors as community involvement, neighboring behaviors, and participation in civic activities (Chavis & Wandersman, 1990; Perkins, Florin, Rich, Wandersman, & Chavis, 1990). The Neighborhood Participation Project (Nashville, TN) and the Block Booster Project (New York, NY) are two efforts that resulted in the most robust evaluation of SOC in relation to a litany of community outcomes including citizen participation, satisfaction with living in the neighborhood, and fear of crime. Results from these studies have been presented in several publications (Chavis, Hogge, McMillan, & Wandersman, 1986; Chavis & Wandersman, 1990; Florin & Wandersman, 1990; Perkins, Florin, Rich, Wandersman, & Chavis, 1990) but offer three

general contributions in relation to sense of community at the neighborhood/residential level. The first contribution is that empirical support for the four dimensions of the McMillan and Chavis model of sense of community was demonstrated in a large, community sample of residential blocks (Perkins, Florin, Rich, Wandersman, & Chavis, 1990; Long & Perkins, 2003). The second contribution is that sense of community in the neighborhood setting relates to specific community participatory behaviors such as involvement in civic or community groups, feelings of influence over community problems, feelings of satisfaction with living on the block, neighboring behaviors and contacts, as well as actual and planned length of residence (Chavis & Wandersman, 1990). And the third contribution of this research is its demonstration that sense of community and participation in block associations were causally linked and interactive over time; the findings, using a path analytic strategy, suggested that sense of community and participation in such groups iteratively contributed to one another over time (Chavis & Wandersman, 1990).

Other studies using the neighborhood or geographical setting to examine sense of community have both supported findings from the Neighborhood Participation Project and the Block Booster Project while expanding on them in new and informative ways. Brodsky, O'Campo, and Aronson (1999) examined sense of community in three Baltimore, low-income neighborhoods where they randomly surveyed a total of 914 households across the three neighborhoods. Using hierarchical linear modeling, Brodsky and colleagues (1999) demonstrated the value of examining neighborhood SOC at the individual and the aggregate level, noting different correlates of SOC at the two levels of analysis. Interestingly, in both the individual and the community levels of analysis, knowing another successful parent in the neighborhood was the most powerful predictor of SOC in their best fitting models.

Similarly, Martinez, Black, and Starr (2002) investigated SOC, social embeddedness, satisfaction with neighborhood, and perceptions of crime and social disorder in a sample of 129 predominantly African American mothers in the Baltimore area. Study measures were taken of the mothers when their children were 3 years of age and again at 5 years of age. The study demonstrated that sense of community was negatively related to maternal depression, positively related to social support, positively related to parental competence/efficacy, and negatively related to perceptions of crime and social disorder in their neighborhoods. These findings have potentially important implications for understanding the connections between perceptions of neighborhood and key parenting variables that may ultimately relate to child developmental outcomes (although the authors did not report on child outcomes). Additionally, the findings support that some parenting factors relate to SOC in neighborhoods; perhaps this suggests parenting factors might also relate to SOC in primarily relationally-based settings as well, particularly if the setting is directly relevant to parenting/parents. The present study will examine this possibility.

Sense of Community in Relational Settings

As society has become more mobile and communication among diverse groups has become more easily established, several investigators have argued that community can no longer be confined to geographic settings such as the neighborhood (Catano, Pretty, Southwell, & Cole, 1993; Kingston, Mitchell, Florin, & Stevenson, 1999; Hill, 1996; Rapley & Pretty, 1999). In more recent times, research has been developing and beginning to support the relevance of SOC in the context of relationally-based settings. In general these investigations have expanded from a focus on SOC in the neighborhood or block to other geographically-linked but largely relationally-based settings, such as university communities

(Loomis, Dockett & Brodsky, 2004), public schools (Bateman, 2002; Battistich, Solomon, Kim, Watson, & Schaps, 1997; Chipuer & Pretty, 1999), and work environments (Chipuer & Pretty, 1999; McCarthy, Pretty & Catano, 1990; Pretty & McCarthy, 1991; Royal & Rossi, 1996).

Several studies have demonstrated that SOC is important in relationally-based communities and offer the potential for discovery of new aspects of SOC not considered in primarily geographic settings. Loomis, Dockett, & Brodsky (2004) reported on changes in SOC within a university setting during a time when the university was experiencing an external threat (the local authorities wanted to restructure and relocate the campus to a less desirable area of Baltimore) and later after the threat had subsided. They demonstrated in successive independent samples of university students that SOC was higher with the university during the time of the threat and was lower after the threat had subsided. This suggests that SOC may increase when threats to the community are present and decline when such unifying crises are absent. Loomis' findings were limited, however, in that they relied on successive independent samples rather than longitudinally following the same sample before, during, and after the threat. However, the findings suggest that SOC may be dynamic and responsive to environmental forces that may wax and wane over time.

Within a high-stress employment group such as firefighters, Cowman, Ferrari & Liao-Troth (2004) noted the importance of SOC among co-workers (firefighters) to reported satisfaction with support by co-worker caregivers and levels of stress associated with care giving to co-workers. More specifically, Cowman and colleagues reported that the relation between SOC and satisfaction with co-worker care giving was partially mediated by social support satisfaction; and that the relation between SOC and stress with care giving to co-

workers was fully mediated by social support satisfaction. Their models suggest that social support may be an important variable to consider when explaining relations between SOC and satisfaction and/or stress, particularly within high-stress job settings.

In another study examining an internet-based interest-group (Science Fiction Fandom), researchers have also noted that SOC may be associated with conscious identification with the group (Obst, Zinkiewicz, and Smith, 2002a; 2002b). Of note, these authors also found that member individuals reported a higher SOC with the interest group as compared to their own neighborhoods. Taken together, evidence is accumulating that the notion of SOC in primarily relational settings is a viable and perhaps more appropriate expansion of the initial conceptualization of SOC such that exploring the inter- and intrapersonal experience of SOC in multiple salient contexts may further inform theory and construct development.

Social support, stress, and self-efficacy. Related constructs such as social support, social networks, stress, and self-efficacy have particular relevance when considering SOC in relational communities. Although many scholars argue that SOC is distinct from these related constructs, several studies have examined SOC as a predictor of these psychological states or as mediated or moderated by these factors (Bishop, Chertok, & Jason, 1997; Cowman, Ferrari, & Liao-Troth, 2004; Green & Rodgers, 2001; Hobfoll, Jackson, Hobfoll, Pierce, & Young, 2002; Laudet, Cleland, Magura, Vogel, & Knight, 2004; Martinez, Black, & Starr, 2002). In the SOC literature, social support is defined broadly and most often refers to external supports from others, social networks, and/or feelings of social embeddedness. Hereafter social support is defined generically as a construct reflecting the perceived availability of and satisfaction with supports provided to an individual by another (others).

Several studies have demonstrated positive associations between SOC and social support, but generally with low or modest correlations (Bishop, Chertok, & Jason, 1997; Green & Rodgers, 2001; Martinez, Black, & Starr, 2002). As reviewed earlier, a recent study by Cowman, Ferrari, and Liao-Troth (2004) revealed that social support may also serve as a mediator of relations between SOC and outcomes such as stress. Specifically, their findings that firefighters with higher levels of satisfaction with social support given by co-workers may have less stress associated with providing care supports to others. These results demonstrate the potential influence levels of social support may have in understanding SOC as it relates to psychological outcomes.

Similarly, in a recent study of mutual aid support groups for those previously addicted to substances, Laudet, Cleland, Magura, Vogel, and Knight (2004) found that social support from other group members partially mediated the effects of attendance in the 12-Step program on maintaining a substance-free lifestyle. Although this study did not explicitly examine SOC as a potential mechanism for promoting social support within the self-help group, the study reports on the formation of social bonds and support within the context a 'recovery community'. Laudet and colleagues found that social support was bolstered by attendance in the group meetings and acted directly in reducing recidivism among these recovering addicts. These authors reported similar findings in previous research of the self-help/mutual aid support also noting the important relevance of social support provision within the group members and sessions, as well as in reducing recidivism (Laudet, Magura, Vogel, & Knight, 2000; Magura, Laudet, Mahmood, Rosenblum, Vogel, & Knight, 2003).

A few studies have also linked sense of community to reduced feelings of stress and increased self-efficacy. As reviewed earlier, social support and SOC may interact to effect

levels of job related stress for firefighters (Cowman, Ferrari, and Liao-Troth, 2004) and work-related burnout has been related to lower levels of workplace SOC (Catano, Pretty, Southwell, & Cole, 1993; Pretty, McCarthy, & Catano, 1992). Certainly environmental stressors such as those noted in workplace studies may relate to levels of perceived stress but the direction of causality cannot be determined. Perhaps stressful work environments create lower workplace SOC; alternatively, perhaps workplaces lower in SOC are more stressful. High levels of stress may make it difficult for individuals to feel SOC with a community (relational or geographic) due to preoccupation with immediate needs or crises but this assertion needs further research.

Although stress is not a personality derivative, individual personality characteristics may relate to stress sensitivity and reactivity. In fact, in a recent investigation, the "Big Five" personality traits were investigated as predictors of SOC in a college and high school sample (Lounsbury, Loveland, & Gibson, 2003). In this study, Lounsbury and colleagues found that agreeableness, conscientiousness, extraversion, and neuroticism were all positive predictors of SOC in a high school sample, and extraversion and openness were positive predictors of SOC in a college sample. Their findings suggest that among relatively homogenous, youthful samples of high school and college students, personality characteristics may also predict SOC. In as much as personality traits are differentially related to stress sensitivity and reactivity, stress may also relate to SOC. In summary, it is difficult to ascertain the complex relations among environments, personality traits, social support, stress, and SOC; their relevance to each other has been demonstrated in a variety of settings but largely in cross-sectional studies.

In terms of self-efficacy, only a few studies have related (at times, through inference) individual or group efficacy to SOC constructs. Specifically, Chavis and Wandersman's (1990) earlier work demonstrated that sense of community is both related to levels of personal and group power in the context of civic or neighborhood action. They also noted that levels of personal and group power over civic and neighborhood issues contribute to increases in sense of community at later time points. In many ways personal and group power could be thought of as forms of self- and group-efficacy.

Collectivist cultural groups present opportunities to further elucidate links between sense of community and self- or group-efficacy. One such example is provided by Hobfoll and colleagues (2002) who examined "communal mastery" and its correlates in a study of Native American women (N=103). The authors defined communal mastery as a collectivist perspective or a "sense of shared mastery" in the face of challenges. Hobfoll compared psychological outcomes of those high in communal mastery to those high in self-mastery perspectives, e.g. lacking a collective, communal approach to mastery over challenges in life. The study demonstrated that women with high communal mastery were not as negatively affected by stress (measured by depressed mood) as women who were low in communal mastery. Additionally, the authors found that women low in communal mastery reported increases in anger as their stress increased, whereas this was not true for women high in communal mastery. One could interpret communal mastery in this study as the combination of self-efficacy and sense of community in that aspects of personal efficaciousness are connected to perceptions of group support and assistance. The authors' findings suggest that among Native American women, a sense of community (as defined by communal mastery) may serve as a buffer to stress and may relate to healthier outcomes.

In fact, such a perspective is further supported when considering that SOC has been positively associated with forms of self-efficacy such as parental competence/self-efficacy in other studies (Green & Rodgers, 2001; Martinez, Black, & Starr, 2002). Martinez and colleagues found among African American mothers in a Baltimore community that SOC and satisfaction with their neighborhoods were significantly and positively correlated to measures of parental self-efficacy. However, they also found that SOC with the mothers' neighborhood was significantly positively correlated to measures of parental competence and negatively correlated to levels of maternal depression in their sample. Thus, among low-income, African American mothers in Martinez's study, SOC with neighborhood was related to important parenting variables.

Research of SOC focusing on parent-relevant factors calls attention to the relation between parenting efficacy and SOC, at least in neighborhood contexts. Developmental and intervention literature suggests that higher levels of perceived parental competence, parental/maternal self-efficacy, and positive parenting strategies all contribute to child developmental outcomes (Bronfenbrenner, 1986; Coleman & Karraker, 1998; McLoyd, 1990) and has indicated that these variables are related to the academic performance and abilities of children (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Seefeldt, Denton, Galper, & Younoszai, 1999) and social competence of children (Brody, Flor, & Gibson, 1999). However, studies have found that these positive parental attributes are less prevalent in lower income, lower education, and highly distressed groups and that racial/ethnic minority parents are over-represented in these lower socio-economic groups (Elder, Eccles, Ardelt, & Lord, 1995; McLoyd, 1990).

In as much as parents with higher levels of SOC with their neighborhoods also have higher levels of perceived parental competence, perhaps SOC is a factor among many that relates to parenting practices and perceived self-efficacy. Although these relations do not presume causality and perhaps are even bi-directional, many scholars believe external factors significantly influence parenting beliefs and decisions, perceived confidence, and ultimately children's development (see review, Bronfenbrenner, 1986); SOC with relevant communities may be one of these factors from an ecological theoretical standpoint and is at least implicated in a few investigations (Green & Rodgers, 2001; Martinez, Black, & Starr, 2002). However, SOC findings have not always been associated with positive outcomes. Brodsky (1996) noted that among impoverished single mothers lower or negative levels of SOC with one's neighborhood may actually be protective if the environment is risky or dangerous environments; such protective behaviors may actually reflect a level of self-efficacy around decisions to embrace or reject a community. Thus, context must not be ignored in the study of SOC as the meaning of findings may not relay fully the nature of relations to SOC.

Theory and Research of Enrollment and Engagement in Interventions

Despite previous literature noting an association between SOC and a variety of geographic and relational settings, the question of whether creating SOC should be a deliberate goal within interventions remains to be examined. Several theoretical positions and empirical findings suggest that SOC is a plausible construct to explore as it relates to engagement in a community or group-format intervention program. In particular, the theory of reasoned action (Fishbein & Ajzen, 1975) and its extension, the theory of planned behavior (Ajzen, 1991), social learning theory (Bandura, 1977), and social cognitive theory (Bandura, 1986) are often applied to psychological and health education interventions with

the goal of changing or modifying behavior to optimize physical or mental health. Although Bandura's work is most relevant to SOC *within* the context of intervention delivery, the work of social psychologists provide some considerations for how and why individuals may *decide* to participate in any intervention; and, as such, it is discussed prior to the issue of intervention delivery.

Theory of planned behavior. The Theory of Planned Behavior (Ajzen, 1991) and the original base theory, the Theory of Reasoned Action (Fishbein & Ajzen, 1975), provides a critically relevant perspective on the reasons individuals decide to enroll in intervention programs. Among several key components used to predict human behavior and decision-making, the theory posits a cognitive cost-benefit analysis (a value-expectancy perspective) that individuals undertake prior to enrolling in any intervention program; these theories are often associated with the Health Beliefs Model (Rosenstock, 1990) in that beliefs and decisions to engage in preventive health behaviors are factored into the cost-benefit analysis. Additionally, the cognitive decision-making process is not only effected by anticipated and valued benefits of the action but also how it relates to social norms related to the behaviors of interest, individual attitudes about the behavior, and control over factors that could support or hinder completing the behavior. The Theory of Planned Behavior offers a long history of research in social psychology and health behavior research that aid in understanding the relation between attitudes, intentions, and the process whereby they act to predict decision-making (Ajzen, 1991; Ajzen & Fishbein, 1977, 1980). These factors also have relevance to participants' decisions to consent and enroll in intervention programs.

Enrollment, retention, and recruitment in interventions. Spoth and Redmond (1995) evaluated aspects of recruitment and engagement in a parent-focused preventive intervention

as they relate to health beliefs and perceived benefits of participation. Their findings suggest that perceived susceptibility for the negative health outcome, perceived benefits of participation, and perceived barriers to participation are predictors of parent participation in a family-focused, preventive intervention intended to reduce risky health behaviors in adolescents. They found that lower income parents were less likely to perceive their child as susceptible to the health outcomes the intervention hoped to prevent or reduce. Later research by the same investigators also found lower socio-economic status and lower educational levels among parents were related to lower levels of attendance in a similar parent-focused preventive intervention (Spoth, Goldberg, & Redmond, 1999).

Findings from a longitudinal evaluation of mental health systems of care models also lend support to the notion that parents make reasoned decisions about whether or not to engage in intervention. Rogers, Fernandez, Thurber, and Smitley (2004) sought to understand a 26% attrition rate from the Systems of Care evaluation in a Southern state. Although they found some support for the idea that parents with higher levels of education remained enrolled in the study, the major factors associated with retention in their evaluation were higher clinical levels of impairment and presence of externalizing problems at program entry (target youth). These findings suggest that families remained enrolled at least in part because parents (and youth, perhaps) perceived a need for the services and a potential benefit to engaging in the program and its evaluation while parents of less impaired youth did not remain in the program once they no longer perceived benefits to participation.

Similarly, literature from mutual aid support programs such as Alcoholics Anonymous and other 12-Step programs for recovering addicts indicates that enrollment, attendance, and retention in self-help programs are problematic over time (McIntire, 2000;

Meissen, Gleason, & Embree, 1991). It is plausible that attrition is a function of participants' perceptions of the value and benefits of program participation if individuals do not perceive benefits through participation in self-help programs. Luke, Roberts, and Rappaport (1993) found that member-group fit may be a salient construct in understanding rates of attendance in self-help groups for those with mental illness. In their study of 644 people first attending one of 15 different GROW group meeting in Illinois over a 27-month observation period, the authors found individuals who were older, more educated, and not married were more likely to attend groups for longer periods of time. They also found that higher functioning attendees dropped out of GROW groups faster than lower functioning participants, and that gender distribution of initial group meetings predicted whether or not a newcomer would drop out. Specifically, persons first attending a group that was predominantly female were more likely to have dropped out of GROW than if the first group meeting was mixed or predominantly male. Furthermore, Luke and colleagues (1993) found that member-group fit measures of dissimilarity also predicted length of attendance; persons who were attending GROW groups for the first time and who had different hospitalization experiences and different marital status (trend) than the average group member, did not attend as long as those without this dissimilarity with their group at entry. In summary, some evidence in self-help research suggests that initial group factors and characteristics of the group members as compared to the entering person may all influence longevity of attendance in groups.

Retention, attrition, and participation in intervention or self-help programs are of interest to this study; however, they offer examples of settings that differ markedly from primary or at-risk preventive interventions. Specifically, participants do not enroll in preventive interventions necessarily because they perceive an immediate need, as one might

when faced with a medical condition, a mental disorder, or various addictions. When these conditions are not present, it may be even more difficult to understand why individuals are willing to enroll and what factors enter into a reasoned, cost-benefit approach to decision-making. In several ways, interest in enrolling in such preventive intervention programs or self-help groups can be elucidated by examination of patterns and correlates of help-seeking behaviors.

Research on help-seeking practices related to parenting offer additional considerations with regard to recruitment, retention, and engagement in interventions. Very few studies have attempted to understand the complex web of factors and decision points relevant to enrollment in prevention programming activities when reduction of the condition (or risk for the condition) is the goal of intervention rather than already present. Socio-economic factors have been positively related to formal parenting information-seeking (Spoth & Conroy, 1993); formal support-seeking has been positively related to single-parent status (Spoth & Conroy, 1993); while higher numbers of children has been related to higher levels of perceived barriers to formal help-seeking (Spoth & Redmond, 1995).

Redmond, Spoth, and Trudeau (2002) examined parent support seeking behaviors in a sample of over 1200 parents from 26 rural Iowa communities. Their findings indicated that socio-demographic factors are related to levels of formal and informal parent support and information seeking. In their study, parents (regardless of education and income level) reported use of informal parent support seeking at extremely high levels (99% in the last 2 years); however, income level was negatively related to formal support seeking. The finding suggests that parents of lower income were more likely to utilize formal supports. Overall, mothers were more likely than fathers to seek such supports (both formal and informal).

These findings may have critical relevance to parents' propensity to enroll in parent-focused interventions for general parenting supports or assistance. Their results suggest that lower income families may be more willing to enroll and participate in parent support programs but that they also tend to have larger numbers of children and have a higher likelihood of being single-headed households (both presenting increased barriers to participation and logistical concerns which may result in their opting not to seek these support services). However these authors and the work of others challenged by serving populations with numerous barriers to participation indicate the challenges can be overcome by deliberate efforts to reduce barriers and engage participants in the research process (Armistead et al., 2004; Secrest et al., 2004).

Social learning and cognitive theories. Clearly, understanding the reasons people enroll in and decide to attend interventions is important to the success of programs. However, once they make the decision to attend, factors within the intervention delivery may also influence decisions to stay with the program over time. One such factor may be sense of community. In many ways the four dimensions of sense of community as defined by McMillan and Chavis (1986) may have critical relevance to interventions founded on the key components of social learning and social cognitive theories (Bandura, 1977; 1986) in particular. Since Bandura's work is heavily relied upon within intervention development and delivery, it may be important to consider the interplay between SOC, social learning and cognitive theories, and intervention settings/context.

The dimensions of membership, reciprocal influence, needs attainment, and emotional connection naturally connect to the foundational components of Bandura's theories. Applying social learning and social cognitive theoretical components to an intervention theory and delivery, it is possible that the intervention program may be enhanced

if it is delivered in a setting that is rich with sense of community. For instance, if participants in a hypothetical 'learning community' felt they were part of an environment of peers able to provide support and reinforcement of new behaviors, they may be more likely to experience new behavior modeling and feel safe to try the new behaviors. If this is true, and facilitating a sense of community within an intervention program is possible, perhaps new behaviors would be more easily adopted and sustained through a community of supportive peers with similar aspirations. By this example, sense of community may be a natural building block for engagement in intervention programs. The current study examines this possibility.

Other than factors present prior to the introduction of a preventive intervention program, such as those previously reviewed, interventions could consider ways to increase the perceived benefit and acceptability of intervention programs among those who *do* initially engage. To do so, consideration of the program format and inclusion of opportunities to bolster connections between and amongst enrolled participants may serve to promote the delivery of the intervention as it was intended. By building on the social learning and cognitive theories, intervention format may serve to further engage participants and increase the value-expectancy of programs in the eyes of participants.

An example of how a setting may create safe space for community building and perhaps opportunities to intervene with marginalized groups is that of the "alternative setting" (Sarason, 1972; Sonn & Fisher, 1996; Sonn & Fisher, 1998; Sonn, 2002). Building on a largely qualitative examination of historically oppressed South Africans, Sonn and Fisher (1996) noted that participants' 'community' was both externally and internally defined and that alternative activity settings facilitated the intrinsic meaning of community in their study population. Externally imposed definitions of the community were largely a function

of their "Colored" status whereas internal definitions of their community were largely a function of their experiences in activity settings such as schools, churches, or other social gatherings with similar others. The authors contend that sense of community in oppressed or minority communities may be best understood or facilitated through examination of natural activity settings or the availability of alternative settings in which these groups may safeguard and bolster their sense of community despite a non-accepting, dominant cultural environment. Sonn and Fisher also posit that interventions providing 'alternative settings' help to build a sense of community and support a safe space for valuable reductions in social risk.

Such findings and theoretical exploration suggest that engaging intervention participants in activities where they feel ownership and membership, preserve some of their own beliefs and values, and can safely explore new ideas and behaviors is an ideal use for alternative settings, particularly when participants are largely minority or disenfranchised groups. Creating alternative settings for those living in conditions of risk (e.g., low SES, high crime, and poor schools) may provide a relatively natural and safe setting for an intervention program and create a welcoming, resource-rich environment. Both the process and product of sense of community may be critical to the success of such alternative settings.

It is critical to note that there has been very limited research or discussion of the relevance and influence of contextual differences and racial, ethnic, or cultural contributions in the examination of SOC. Sonn and Fisher's work has been the most culturally sensitive and has focused on SOC experiences among South Africans (Sonn & Fisher 1996, 1998), Chileans, and immigrants' in Australia (Sonn, 2002). Through qualitative research methods, these authors have demonstrated that the socio-political context of historically oppressed or

marginalized racial/ethnic groups may influence the development of SOC within these groups, highlight the importance of activity settings as contexts in which to study SOC, and explore SOC with consideration for cultural influences and shared histories of oppression. Given the experiences of oppression, systemic disenfranchisement, and social marginalization of racial and ethnic minorities in the US, it is possible that socio-political context and racial/ethnic cultural practices differentially effect the development and maintenance of SOC among culturally diverse populations. Little research has attempted to address this possibility with cross-cultural comparative studies or other sociological research, excepting the works and recommendations of Sonn and colleagues who call for culturally sensitive SOC investigations (Sonn, Bishop & Drew, 1999).

Even though research of SOC has not been well-developed in terms of racial, ethnic, and cultural contributions, the work of many has demonstrated the relations of SOC to various psychological outcomes among African Americans is not in contrast to those seen in European American samples. Specifically, among predominantly African American samples, researchers have found that positive SOC was related to such constructs as positive school engagement (Bateman, 2002), lower levels of maternal depression and higher levels of social support (Martinez, Black & Starr, 2002), satisfaction with community learning centers (Brodsky & Marx, 2001), and satisfaction with neighborhood (Brodsky, O'Campo & Aronson, 1999). A notable exception that highlights the relevance of socio-economic context is Brodsky's work (1996) which demonstrated that among mothers living in impoverished and unsafe neighborhoods, lower SOC with these neighborhoods may be a protective response to unsafe and non-supportive community environments. Her findings suggest the contextual reality for impoverished African American women may, in fact, influence SOC

with their neighborhoods in ways that are adaptive but have not been previously acknowledged or explored. Past experiences with social services, research projects, and other social systems may also affect if and how African Americans experience SOC in group-based, intervention settings but this suggestion has not been empirically examined.

Examples of SOC in Intervention Settings

One example of an alternative setting intervention that promotes SOC is provided by Ferrari and colleagues (2002), who carefully describe the many ways a residential substance abuse recovery home (the Oxford House) promotes the success of the intervention partly through the development and maintenance of SOC within this residential, mutual-support program. The authors suggest the intervention setting promotes a sense of community among residents and ultimately contributes to the success of the program goal of keeping former substance abusers from recidivating. Bishop, Chertok, and Jason (1997) evaluated the role of SOC in the Oxford House setting and related it to other constructs such as social support and stress. Among 133 male residents of one of the ten Illinois Oxford Houses, the authors found several dimensions of social support were positively correlated to the SOC of residents. In particular, aspects of social support positively predicted a feeling of common goals or mission within the program. However, the authors found that neither hope nor stress were significantly correlated to or predictive of SOC in this sample.

Although Bishop and colleagues evaluated sense of community in a residential treatment program, their findings may have important relevance to other community-based or group-based intervention programs. However, generalizations to other populations are difficult because the Oxford House residents self-select house members. Although self-selection of new residents is noted by the authors as critical to the ecological validity of the

program and possibly the program's success, the evaluation results may be driven by the effects of the person-environment match facilitated by the program rather than the intervention characteristics alone. Despite the ecological validity inherent in this complex setting, the Oxford House evaluation approach did not allow for full investigation of the relation between SOC and program success due to the presence of self-selection biases and entirely male samples. It would be valuable to confirm Bishop, Chertok, and Jason's (1997) results in a sample of randomized intervention participants (e.g., the Oxford House model versus a group-based, non-residential model versus usual care) to fully explore the intervention success and the function of SOC within a recovery setting.

Learning communities offer other settings in which sense of community has received increasing attention. Learning communities can be broadly defined as schools, education programs, and self-help or mutual support programs and can be thought of as social or natural intervention programs where membership, emotional connection, goal-sharing, and influence and accountability are often present. For instance, the popularity and proliferation of self-help groups such as 12-Step programs like Alcoholics Anonymous and Narcotics Anonymous (Humphreys & Rappaport, 1994; Weisner, Greenfield, & Room, 1995) may indicate the desire and support for programs that build mutually supportive environments among peers facing similar issues. The provision of social supports in the group context is one of the hallmarks of self-help groups; as such, its relevance to SOC is particularly striking. It seems there may be much to learn from self-help organizations and forms of facilitation with respect to SOC in the group context and in member-group fit (Luke, Roberts, & Rappaport, 1993). Clearly, benefits from self-help and mutual aid groups have been demonstrated in scientific evaluations (e.g. Humphreys, Huebsch, Finney, & Moos, 1999;

Laudet, Cleland, Magura, Vogel, & Knight, 2004; Moos, Finney, Ouimette, & Suchinsky, 1999). Unfortunately, SOC development and maintenance appears so integrated into the format and goals of these groups that research on SOC has not been a focus whereas understanding the role of social supports and social networks has been a primary focus.

Although little research has directly evaluated the role of SOC in 12-Step or other self-help programs, it has been shown that these environments are high in social supports, emotional connection and member bonding (Laudet, Cleland, Magura, Vogel, & Knight, 2004), and do increase the likelihood of sobriety in AA members (Emrick, Tonigan, Montgomery, & Little, 1993); therefore they are likely also high in and supportive of SOC as it encompasses many examples of the dimensions posited by McMillan and Chavis (1986). Addiction recovery groups have shown effectiveness in reducing recidivism among members (e.g., Laudet, Cleland, Magura, Vogel, & Knight, 2004; Moos, Finney, Ouimette, & Suchinsky, 1999). Laudet et al. (2004) demonstrated that the positive effects of such self-help groups are due to longevity in the program and partially explained by the high level of social support provided by the group to group members. Given previously reviewed literature demonstrating positive correlations between social support and SOC, it seems likely that SOC may also be a relevant factor in self-help groups. People faced with a variety of challenges in living may want peer-to-peer supports separate from or in addition to professional services; in fact, individuals are often referred by professionals to these groups for additional supports (Salzer, Rappaport, & Segre, 2001). The international growth of the self-help model programs in the areas of reintegration and continued functioning of those with mental illness or addiction problems offers evidence that some people experiencing similar challenges desire mutual aid environments where similar peers assist them

(Humphreys & Rappaport, 1994; Luke, Roberts, & Rappaport, 1993; Rappaport, 1993; Toro, Rappaport, & Seidman, 1987).

A more traditional example of a learning community is the school. Educational learning communities include individual schools, those persons that make up the schools, and the surrounding community. Higher levels of sense of community with and within schools has been found to be associated with reduced feelings of loneliness, worry, and isolation in adolescents (Pretty, Conroy, Dugay, Fowler, & Williams, 1996; Pretty, Andrews, & Collet, 1994), positive school engagement and participation, positive academic achievement, lower rates of school failure and drop-out (Bateman, 1998, as cited in Bateman, 2002), increased feelings of safety (Bateman, 2002), and less frequency of negative behaviors such as truancy (Royal & Rossi, 1996), and psychological adjustment problems (Kuperminc, Leadbeater, Emmons, & Blatt, 1997; Kuperminc, Leadbeater, & Blatt, 2001).

Bateman (2002) described some of the characteristics of alternative (magnet) and regular public schools where students felt a sense of community. In particular she noted that the availability of after-school clubs, sporting groups, and opportunities to interact with the surrounding local community all distinguished the higher levels of sense of community in the magnet schools when compared to the regular public school in her study. One of the interesting aspects of Bateman's study is that non-scholastic activities not typically associated with the primary educational mission of schools were characteristic of schools with higher levels of SOC; higher levels of SOC have been related to positive school engagement and academic achievement (Bateman, 2002). In short, building SOC through non-mission activities may actually support the ultimate mission of education in these learning communities.

Similarly, Brodsky and Marx (2001) conducted a qualitative assessment of McMillan and Chavis' model of SOC within a community learning center/job training program (the Caroline Center) in the Baltimore area. The authors noted from their in-depth interviews with participating women that the center environment, staff, and peers represented all four dimensions of SOC to the participants and that their experiences in their own neighborhoods stood in contrast to their positive experience in the job training center. This study stands alone in the literature as the only effort to document the specific dimensions of SOC posited by McMillan and Chavis (1986) using qualitative data. Brodsky and Marx findings suggest, despite growing dissention around the specific dimensions of SOC proposed by McMillan and Chavis, the dimensions were qualitatively supported among a sample of low-income, African American women in a learning community.

In summary, the importance of understanding if and how one's sense of community may influence levels of engagement in a community program may have significant impact on the design and delivery of intervention programs. Sense of community has not historically been a focus in group-based intervention evaluations but may shed light on why the program did or did not achieve its goals. Although many advances in our understanding and operationalizing of sense of community continue to inform the literature, many questions still remain unanswered. To date, longitudinal data is lacking that would inform the natural course of an individual's perceived sense of community within a referent community. Chavis and Wandersman (1990) examined SOC with neighborhood at two time points but did not describe changes in SOC among their sample. Additionally, Loomis and colleagues (2004) examined change in SOC before and after a threat to a university community but used successive independent samples rather than longitudinal analysis of the same participants.

No studies have examined SOC in the context of a preventive intervention with a randomized experimental design. Additionally, no previously reported studies have attempted to link SOC and the engagement of participants in a longitudinal, group-based intervention program.

Research Questions and Hypotheses

This study integrates the theoretical and empirical literatures on sense of community (SOC) and relates the concept of SOC to participant engagement within a prevention-oriented, group-based parenting program, Legacy for Children™. Specifically this study examines the following empirical questions: 1) How does mean SOC with the parenting program differ between intervention and control participants at 6 months and 12 months following program entry? 2) How do baseline levels of social support, stress, and self-efficacy relate to later sense of community with the parenting program? 3) Within the intervention group, how do individual baseline characteristics relate to participant engagement early in the program? 4) Within the intervention group, does SOC with the parenting program relate to participant engagement over time? Do SOC and engagement influence each other over time? This study posits the following hypotheses for each research question:

Research Question 1

How does mean SOC with the parenting program differ between intervention and control participants over time?

Hypothesis 1.1. At 6 months and 12 months the intervention participants will endorse higher mean levels of sense of community with the Legacy program than control participants. To address the alternate explanation that mean group differences in sense of community with Legacy may reflect a tendency to rate their sense of community with any referent more

highly with the passage of time, mean differences in sense of community with neighborhood were also explored at baseline, 6 months, and 12 months (as a control construct). Mean differences on sense of community with neighborhood between the groups or over time were not expected.

Research Question 2

How do baseline levels of social support, stress, and self-efficacy relate to later sense of community with the parenting program?

Hypothesis 2.1. Higher levels of social support satisfaction, lower levels of stressful life events, and higher levels of self-efficacy (general, maternal, and parental competence) at baseline will positively relate to participants' sense of community with the Legacy program at 6 months. It was predicted that intervention status would moderate the relationship between these independent variables and sense of community with Legacy such that predictors would be more strongly associated with sense of community with the Legacy program for intervention participants than for the control group.

Hypothesis 2.2. Higher levels of social support satisfaction, lower levels of stressful life events, and higher levels of self-efficacy (general, maternal, and parental competence) at baseline will positively relate to changes in participants' sense of community with the Legacy program from 6 to 12 months. It was predicted that intervention status would moderate the relationship between these independent variables and sense of community with Legacy such that predictors would be more strongly associated with sense of community with the Legacy program for intervention participants than for the control group.

Research Question 3

Within the intervention group, how do individual baseline characteristics relate to participant engagement early in the parenting program?

Hypothesis 3.1. Initial participant engagement (attendance and group leader engagement ratings) with the Legacy program will be a function of baseline participants' levels of social support, stress, and self-efficacy (general, maternal, and parental competence). It was predicted that participants with lower levels of social support, higher levels of stress, and lower levels of self-efficacy would be less engaged with Legacy than participants with higher levels of social support, lower levels of stress, and higher levels of self-efficacy.

Research Question 4

Within the intervention group, does SOC with the parenting program relate to participant engagement over time? Do SOC and engagement influence each other over time?

Hypothesis 4. A structural model of engagement and sense of community with Legacy in year 1 of the program was hypothesized to fit the data in this study (Figure 1). The model hypothesized that participant engagement early in the intervention would be a function of baseline participant psychological characteristics and would predict sense of community with Legacy at 6 months. Sense of community with Legacy at 6 months would predict later levels of engagement and sense of community at 12 months. It was also expected that engagement at 6 months would predict sense of community with Legacy at 12 months and later engagement at 12 months.

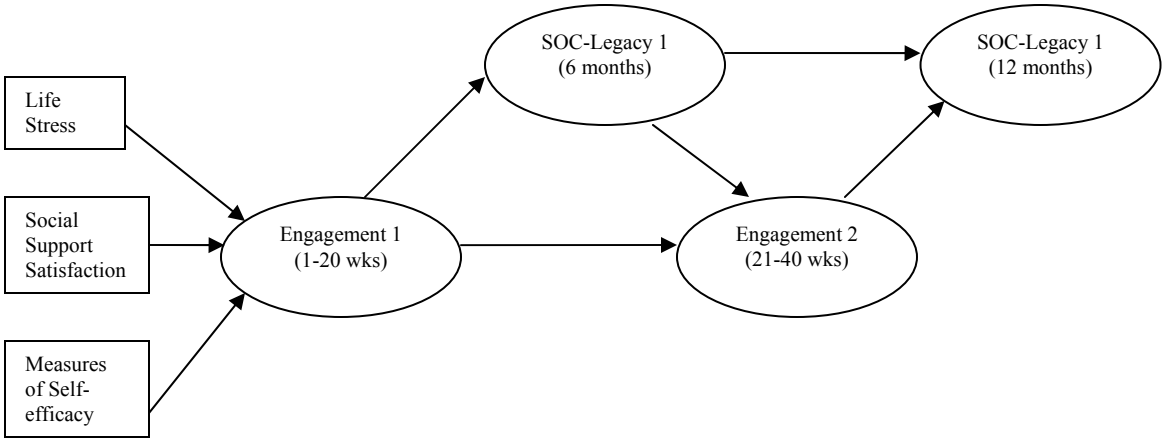


Figure 1. Hypothesized Structural Model.

CHAPTER 3:

Method

Description of Legacy for Children Intervention

The Legacy for Children (LFC) intervention program was evaluated with a rigorous randomized, controlled trial design to estimate the effectiveness of this parent-focused intervention. LFC had the goal of reducing developmental delays or problems in children born to conditions of risk such as poverty and residence in neighborhoods in Miami, FL and Los Angeles, CA characterized by poverty and historically low scholastic achievement. The program was facilitated in a group format where mothers attended weekly meetings to discuss child development, child rearing, future expectations, and parenting issues. The group sessions also exposed participants to potentially new parenting strategies and knowledge as facilitated by the curriculum topics that were meant to promote child development, a trained group leader, and the discussions amongst the participating mothers.

The intervention is intended to foster a desire to adopt positive parent-child interactions; feelings of self-efficacy and investment in child rearing; and the belief that, as parents, participants have the power to influence their infants' development and growth in the long-term despite adversity in everyday life. Consenting participants were randomly assigned to parenting group intervention or a control group that received periodic parent and child assessments. If enrolled in the parent group intervention, the mother-child dyads were invited to participate in the group sessions and assessments until the study child reached age five. If randomized to the control group, the mother-child dyads were invited to participate only in periodic assessments until the study child reached age five.

LFC follows a curriculum covering a broad range of child development topics over the first five years of life and incorporates the philosophies and general content of many parent education and early child development curricula. The curriculum draws from social learning theory and was deliberately designed for group discussions, flexibility, community-building, and shared ownership among staff and participants. The group format was chosen to facilitate opportunities to bolster parent-to-child interactions and parent-to-parent interactions within a group format. As such, the curriculum allows group leaders to assume their primary role as the group facilitator while earning another role with each participant that is more akin to a peer. In sum, the LFC parent groups emphasize parent-to-parent and parent-to-child interactions, mutual support, acceptance, and group collaboration in the process of understanding the participants' desires, abilities, and options toward becoming an efficacious parent. It is hoped that the intervention experience will result in the adoption of positive parenting behaviors and feelings of investment and self-efficacy to shape the children's development in the long-term. To help families overcome obstacles to participation, child care for siblings and transportation to and from group meetings are also made available to intervention participants. The parenting groups are held in a community location rented by the program (several rooms in a local YWCA community center) at the Miami site and in a university space at the Los Angeles site.

Fostering a sense of community within LFC was an explicit goal of the intervention. It was hypothesized that fostering a sense of community within the program would result in a greater connection to the program and an increased likelihood that parents would adopt new behaviors to promote their child's development. The program specifically aimed to promote a sense of community such that: 1) Parents form a supportive community with each other and

with program staff; 2) Parents increase their own capacity to identify community and social supports; 3) Parents understand the nature and benefits of being part of a parent-focused community; and 4) Parents participate in other groups or communities that can provide additional parenting or personal supports. Within the intervention, group leaders and program staff facilitated meeting these goals by modeling, listening, sharing, encouraging discussion, providing relevant and appropriate materials on resources, and becoming trusted friends or advisors to the participants with regard to their role as parents. To build emotional connections, trust, and relationships, social activities and family events are also integral components of the Legacy intervention. These activities are intended to support the creation and maintenance of sense of community over the length of the study.

Even though the control mothers were not participating in the intervention groups, it was possible that merely being enrolled in the study and having participated in the periodic assessment facilitated a connection to the Legacy program. To assess this possibility, the control mothers' sense of community with the Legacy program was also assessed during the study period (same as for intervention mothers).

Study Design and Recruitment

This study used data collected as part of the larger, longitudinal evaluation of the Legacy for Children intervention designed and funded by the Centers for Disease Control and Prevention. LFC was implemented in two sites, Miami, FL and Los Angeles, CA. Although the interventions at both sites were based on the same philosophical foundation and overall goals, they each had their own curriculum and delivered the intervention in different ways and for different time periods. More specifically, the Miami intervention groups were weekly meetings, mother and child were to be present at each meeting, and the meetings ran

until the study child reached age five. However, the Los Angeles intervention groups met weekly in ten-week blocks (there were six week breaks in between blocks and before participants returned for another block); mother and child were present on alternating weeks (mother-only groups occur every other session), and the meetings ran until the study child reached age three even though assessments continued until the child reached age five. The present study utilizes only data collected from the LFC, Miami intervention site to reduce the possible confounding effects of site-specific factors and differences in intervention delivery.

Mothers with new infants were recruited from local well-baby units in two large, urban hospital maternity wards in the Miami area over approximately one year (until the total desired sample was attained). Mothers were eligible for the intervention program if they met income eligibility requirements (Medicaid status) and resided in the geographical catchment area for the study such that transportation to and from the groups would be feasible for all participants. Using an experimental design, consenting participants were randomly assigned to either intervention or control groups. Because of the longitudinal nature of the study and the potential for losing statistical power due to attrition, intervention mothers were over-recruited so that the final sample included 3 intervention mothers for every 2 controls. Random assignment occurred after participants consented to be in the study.

A total of 523 mothers agreed to hear about and complete a brief screener for consideration for the Legacy study. Of these, 53 mothers did not meet one or more of the eligibility requirements for the study. One hundred seventy of the 470 mothers eligible for Legacy decided not to consent to participate in the study, contributing to a 36% refusal rate among those eligible to enroll.

Sample. The recruited sample consisted of 180 intervention mothers and 120 control mothers for a total sample of 300. All participants were adults age 18 or older at consent to participate. Although 300 mothers signed informed consent thereby agreeing to participate in the study, 11 of these mothers never completed the baseline assessment and are not included in this study. A sample of 289 mothers was used in analyses.

Procedures. Each LFC parent group had a group leader and the group leader facilitated three separate parent groups on average. Each parent group met weekly (excluding major holidays). The present study included data from the first 12 months of the program. However, LFC is a longitudinal study and parent groups will be offered to participants at the Miami site until the study child reaches age five. Once enrolled, groups began on average 3 months after consent to participate was obtained. This delay in starting the groups was necessary so that the mother could recuperate from child birth, get adjusted to life with her newborn, and have time to complete the baseline assessment prior to beginning parent groups.

Intervention and control mothers received periodic assessments delivered by a trained assessor. All study assessments were conducted by non-intervention staff and these assessors were blinded to the participant's group assignment. All participants completed in-person, computer assisted personal interviews (CAPI) and a few sections collecting potentially sensitive information were conducted using audio computer-assisted self interviews (ACASI). On average, assessments took 2 to 3 hours per participant to complete. Participants were given an incentive of $100 for each assessment completed in acknowledgment of their time. Baseline assessments were scheduled as soon as possible after the participant was notified of her intervention or control status. Intervention

participants must have completed their baseline assessment prior to initiating intervention to be included in these analyses. Assessment data for the present study were collected at baseline, 6 months, and 12 months. Additionally, intervention staff completed periodic ratings of each intervention participants' engagement with their group and maintained detailed attendance records. Process data used in these analyses include the group leaders' reporting of individual participants' attendance and individual parent intervention engagement ratings approximately every 10 weeks during the study period.

Measures

Socio-demographics. Demographic characteristics were gathered at the baseline assessment using the CAPI data collection methodology previously described. All consented participants were adult females (mothers) age 18 or older. Other demographic information collected included marital status; highest degree earned; annual income and number of those dependent on the income; race and ethnicity; age; and the number of additional children under age 18 (in addition to the study child) in the household.

The study measure of income is the ratio of annual income to number of dependents on the income and is hereafter referred to only as 'income level'. To facilitate statistical analyses, mothers who did not supply income and/or dependent information were assigned an income ratio equal to the mean of the sample (M = 0.66). Additionally, 16 of the participants randomized to intervention never attended an intervention group (attendance = 0) during the first year of the program. Chi-square and ANOVA statistics revealed no significant differences between the non-attending and attending intervention participants on any demographic or independent variables of interest in this study. To maintain the experimental design of the study and further understand factors that may relate to their non-participation in

groups, these non-attending intervention participants were included in analyses as part of the intervention group (as they were randomized).

Sense of community index. The Sense of Community Index (SCI) (Perkins, Florin, Rich, Wandersman, & Chavis, 1990), although originally designed to measure sense of community in a neighborhood, is widely used and modified for variant referent groups when appropriate. For example, with minor modifications to the wording of items, the SCI has been used successfully to assess adolescents in school settings (Pretty, Andrews, & Collet, 1994), adults in workplace settings (Chipuer & Pretty, 1999; Pretty, McCarthy, & Catano, 1992), and students in college/university settings (Loomis, Dockett, & Brodsky, 2004). The SCI is a self-report measure of sense of community with one's neighborhood designed to assess the four component dimensions of sense of community posited by McMillan and Chavis (1986) including: feelings of membership, mutual and reciprocal influence, common fulfillment of needs, and a shared emotional connection.

The present study used two modified SCI scales in which the first refers to the participant's neighborhood and the second refers to the Legacy for Children intervention program. The Neighborhood SCI was adapted for use in the present study such that neighborhood remained the referent community as in the original measure (Perkins, Florin, Rich, Wandersman, & Chavis, 1990) but the response set was modified to be a 5-point likert-type scale where 1=strongly disagree and 5=strongly agree. Similar modifications of the original true/false response set to a 3-point or 5-point likert-type scale have been used in previous studies (Chipuer & Pretty, 1999; Loomis, Dockett, & Brodsky, 2004) and recommended in a recent study reviewing the original SCI measure (Long & Perkins, 2003). The Legacy SCI was adapted from the Neighborhood SCI but was changed so that the

referent was the Legacy for Children intervention program (Legacy) and the 5-point scale was again utilized (See Appendix A. for both the SCI-Neighborhood and SCI-Legacy measures). Alpha reliability reported in a recent study with a modified SCI similar to this study demonstrated a total scale reliability ranging from .83 to .86 in two independent samples of university students (Loomis, Dockett, & Brodsky, 2004) over a one-year period.

SCI principal components analysis. Based on theoretical and initial empirical efforts to develop the original scale, the four dimensions of sense of community previously described were expected from the 12-item Neighborhood SCI in the following pattern: Reinforcement of Needs (items 1-3), Membership (items 4-6), Reciprocal Influence (items 7-9), and Emotional Connection (items 10-12). However, because significant modifications to the SCI were made both in the scaling and in the referent group (for the LFC measure), exploratory principal components analysis (PCA) was conducted to determine the characteristics of the measure and its hypothesized subscales and to inform data analysis. Exploratory factor analyses were conducted using principal components analysis (PCA). Analyses were conducted using the baseline Neighborhood SCI data and the 6-month Legacy SCI data; both data collection points were the first time the measurements were taken in this study.

Data screening was first conducted on the Neighborhood SCI (12-item) scale to determine which items were appropriate for inclusion in PCA. Examination of item inter-correlations revealed that item 6, ‘Very few of my neighbors know me’ did not significantly correlate with eight items and had very low correlations with the remaining three items on the Neighborhood SCI. The lack of item inter-correlations among item 6 and the other scale items supported dropping this item from further analysis.

Because the theorized dimensions of sense of community represent facets of an overall sense of community and correlations between factors are therefore expected, component factors were rotated to an oblique solution as in and recommended by Chipuer & Pretty (1999). Communality estimates were analyzed for each item and its shared variance with the other items. A preliminary analysis showed item 4, "I can recognize most of the people who live in my neighborhood' had low communality with the remaining 10 items (all of which had strong communalities); therefore item 4 was dropped from the PCA. A two-factor (component) solution accounted for 58% of the variance (Table 1.). The first factor (labeled "Emotional Connection with Neighborhood") included 5 items with loadings above .35. Items with the highest loadings on this factor included items 1, 5, and 12. The second factor (labeled "Reciprocal Relationships with Neighbors") included 5 items with loadings above .35. Items with the highest loading on this factor included items 3, 7, and 8. The correlation between the two components was .46 indicating that the factors of the Neighborhood SCI were not orthogonal and oblique rotation was appropriate.

Similar to the Neighborhood SCI analysis, data screening revealed a lack of item inter-correlation between item 6, 'Very few people in Legacy know me' and the remaining 11 items; therefore it was dropped from further analysis. A three-factor (component) solution accounted for about 62% of the common variance (Table 2). The first factor (labeled "Emotional Connection with Group") included 5 items with loadings above .35. Items with the highest loadings on this factor included items 1 and 12. The second factor (labeled "Commonality with Group") included 3 items with loadings above .35. The third factor (labeled "Reciprocal Group Influence") also included 3 items with loadings above .35. Correlations among the three components ranged from .35 to .41 indicating the factors were

not orthogonal. In the present study, the two subscales and total score for Neighborhood SCI and three subscales and total score for Legacy SCI were generated by summing their respective items. The scale and subscale reliabilities are shown in Tables 1 and 2.

Table 1. Neighborhood SCI Rotated Factor Structure and Eigenvalues.

Sense of Community Index (Neighborhood) Oblique Rotation, Pattern Matrix of Loadings N=284	**Factor 1: Emotional Connection w/ Neighborhood**	**Factor 2: Reciprocal Relationships w/ Neighbors**
Items		
1. I think my neighborhood is a good place for me to live.	.95	
2. People in my neighborhood share the same values.		.55
3. My neighbors and I want the same things from this neighborhood.		.66
5. I feel at home in this neighborhood.	.86	
7. I care about what my neighbors think of my actions.		.77
8. I have influence over what this neighborhood is like.		.73
9. If there is a problem in my neighborhood people who live here can get it solved.	.40	.45
10. It is very important to me to live in this particular neighborhood.	.53	.35
11. People in this neighborhood get along with each other.	.56	
12. I expect to live in this neighborhood for a long time.	.79	
Eigenvalues:	4.63	1.17
Explained % Variance	46.34	11.72
MSA—KMO = .877		
α = .87 (total scale)	α = .86	α = .74

Note: The item 4 'I can recognize most of the people who live in my neighborhood' and item 6 'Very few of my neighbors know me' were dropped from analyses.

Table 2. Legacy for Children SCI Rotated Factor Structure and Eigenvalues.

Sense of Community Index (Legacy) Oblique Rotation, Pattern Matrix of Loadings N=262	**Factor 1: Emotional Connection w/ Group**	**Factor 2: Commonality w/ Group**	**Factor 3: Reciprocal Group Influence**
Items			
1. I think it is good for me to be a part of Legacy.	.85		
2. People in Legacy share the same values.		.71	
3. Other mothers in Legacy want the same things from Legacy that I want.		.84	
4. I can recognize most of the people in Legacy.		.71	
5. I feel at home in Legacy.	.48	.40	
7. I care about what others in Legacy think of my actions.			.71
8. I have influence over what goes on in Legacy.			.82
9. If there is a problem, Legacy can get it solved.			.61
10. It is very important to me to be part of Legacy.	.73		
11. People in Legacy generally get along with each	.57		
12. I would like to be part of Legacy for a long time.	.81		
Eigenvalues:	4.57	1.18	1.03
Explained % Variance	41.53	10.68	9.34
MSA—KMO = .869			
α = .84 (total scale)	α = .82	α = .64	α = .68

Note: The item 6, 'Very few of my neighbors know me' was dropped from analyses.

Duke-UNC functional social support questionnaire. The Duke Functional Social Support Questionnaire (FSSQ) is a 10-item instrument assessing satisfaction with social support. Response options are on a scale ranging from ranging from 1 (much less than I would like) to 5 (as much as I would like). Examples of scale items include, "I get useful advice about important things in life" and "I get help with cooking and housework". Scale scores are generated by summing the scores of all items. Internal consistency estimates in the range of .81 - .92 have been demonstrated in past research (Broadhead, Gehlback, DeGruy, & Kaplan, 1988, 1989). Consistent with past research, the alpha estimate for the FSSQ in the present study was .81. See Appendix B. for the FSSQ scale.

General self-efficacy. The 23-item Self-Efficacy Scale (Sherer et al., 1982) was used in this study to assess general self-efficacy. The instrument contains two subscales; general self-efficacy (17 items) and social self-efficacy (6 items). Sherer et al. caution that the general and social subscales should not be summed together as they represent distinct components of self-efficacy. Examples of scale items include: "If I can't do a job the first time, I keep trying until I can." and "I give up on things before completing them." For each statement the respondent indicates how much they agree or disagree on the following scale: 1=strongly disagree and 14=strongly agree (See Appendix C. for the Self-Efficacy Scale). The 17-item general self-efficacy subscale has demonstrated good reliability with a published Cronbach's alpha of .86 (Sherer et al., 1982). Higher scores indicate higher levels of self-efficacy. In the present study the social self-efficacy subscale had poor internal reliability ($\alpha = .39$); however, the general self-efficacy subscale had a much stronger reliability ($\alpha = .75$). Therefore, only the general self-efficacy subscale is used in this study.

Perceived parental competence. A measure of parental self-efficacy was the Competence subscale of the Parenting Stress Index (PSI) (Abidin, 1995). The PSI is a standardized, commercially distributed measure of parental stress and includes a subscale to measure parental competence with strong reliability and validity data to support its use. In a normative sample of 2,633, the Competence subscale reliability was .83. The PSI competence scale was used with permission from the publisher, Psychological Assessment Resources, Inc (See Appendix D. for PSI Competence Instrument). The measure is scored using an algorithm and item weighting as supplied by the publisher (Abidin, 1995). Examples of items from the scale include, "I feel capable and on top of things when I am

caring for [infant's name]," and "I have had many more problems raising children than I expected". Higher scores indicated higher levels of perceived parental competence.

Maternal self-efficacy. The measure of maternal self-efficacy was comprised of 12 face-valid items developed for the present study. Example items include, "I can help my baby learn to explore and talk if I try" and "I know what a mother needs to do to help her baby learn to explore and talk". Each item was rated on a 4-point scale (1 = Very true and 4 = Not at all true). Internal consistency was $\alpha = .73$. See Appendix E. for Maternal Self-Efficacy measure.

In summary, the self-efficacy measures used in this study included a general self-efficacy score, a parent perceived competence score, and a maternal self-efficacy score. Taken together, the three measures of self-efficacy were intended to measure distinct dimensions of self-efficacy amongst study participants. In the present sample the measures were correlated with one another only modestly; only one correlation, that between general self-efficacy and parental competence, was significant ($r = .30$). The lack of strong correlations between the measures perhaps indicates some convergent validity but clearly supports discriminant validity. This evidence warranted exploring all three measures of self-efficacy in study analyses as they are not highly collinear and measure distinct aspects of self-efficacy both as an individual and as a parent.

Stressful life events, parenting stress index. The Life Stress scale from the Parenting Stress Index (Abidin, 1995) and was used to measure the occurrence of stressful life events in the present study. The PSI Life Stress scale is published by Psychological Assessment Resources, Inc.; the publishers allowed the use and reproduction of this subscale in the Legacy for Children assessment battery (See instrument in Appendix F.). Participant life

stress was calculated by summing the number of stressful life events in the last 12 months as indicated by each participant at baseline. Higher scores indicated more stressful life events within the last year. Because the majority of participants in this study indicated eight or less stressful life events in the previous year and only a small portion of the sample had experienced more than 8 stressful life events, these data were recoded for analyses. The actual number of stressful life events was recoded such that those experiencing 8 or more stressful life events were assigned the highest level of stressful life events in this study (score = 8).

Participant engagement. Two measures of participant engagement were used: actual attendance in Legacy parent groups and the group leader's periodic assessment of individual participant's engagement in parent groups. In this study, attendance data are required for analyses at various time points and are reported here in 10-week blocks. More specifically, attendance during the first 10 weeks of group equals attendance at time 1; attendance during the next 10 weeks of group equals attendance at time 2; and so forth for attendance at times 3 and 4. Attendance records were carefully maintained by the Legacy staff and reported weekly after the completion of each group session. All 173 intervention participants had complete attendance records.

The second measure of participant engagement was the periodic process evaluation data reported by the group leader on each attending mother's level of participation and engagement with the program/group sessions. This measure included ratings of each mother's engagement in the group and her level of satisfaction with the group sessions as perceived by the group leader at ten-week intervals. The 11-item engagement rating form included items relevant to participation and engagement in the group setting. Each group

leader rated on a 7 point likert-type scale to what degree the participant was engaged with the group and interacted with the intervention program. Examples of items include, "How much do you think this parent enjoys the group?" and "How often does this parent add to the discussion by offering the group new ideas and perspectives?" One item, "At what level is this parent accessing parenting resources in her community?" was problematic for group leaders to rate with confidence. Consequently, in the majority of cases the group leader indicated that she did not know. This item was dropped from the measure of participant engagement. The rating of parent engagement in the group setting was the sum of the remaining 10 items. (See Appendix G. for parent engagement rating measure.)

Additionally, where group leaders did not feel they could adequately assess the mother on specific items, they did not rate the mother on that item. As this missing data is not at random and is meaningful to the present study goals of understanding participant engagement, participant's sum scale score for engagement ratings were calculated with the data available for each participant at each rating period; even if some items were not completed by the group leader (these missing items remained missing and were not entered into the sum score generated for the rating period).

In very few cases the group leaders indicated in comment fields of the engagement form that they did not have enough information to assess a participant's level of engagement even though they may have attended in a given rating period. Group leaders indicated this difficulty for 2 participants in the first rating period and for 6 participants in the fourth rating period. Of these eight participants, 5 had attended only once during the rating period, 2 participants had attended twice during the period, and one participant attended three times. The fact that group leaders did not feel capable of rating these participants on their

engagement suggests that the mothers' participation was limited or too infrequent for an accurate rating. Therefore, it is reasonable to assume these mothers were low engagers during in their limited attendance. Consequently, participants who attended sessions during any rating period but were not rated by the group leader (due to inability to assess) were assigned the lowest engagement scale score of 10.

Similarly, participants who did not attend group sessions during any given ten-week rating period were not rated by the group leader as there was no basis for the rating of that time period. In the present study, non-attending participants were also assigned the lowest possible group engagement rating of 10 for any time point for which their attendance was zero. One mother attended regularly but her data was missing for the first engagement rating and no qualitative data was available giving a reason for the absence of the rating. In this case, the missing score was replaced with the mean of the first engagement rating for the group from which the mother came ($M_{Group\ \#5} = 36.85$).

In study analyses, "initial attendance" was calculated by summing cumulative attendance over weeks 1-20 of the intervention, and "initial engagement" scores were calculated by summing the group leaders' first and second engagement ratings (covers weeks 1-20). Initial attendance and engagement ratings were used in relevant regression analyses and served as indicators of the latent construct "Engagement 1 (1-20 weeks)" in the evaluation of the hypothesized structural model. Similarly, later attendance and engagement score were calculated by summing the third and fourth measures of attendance and engagement (21-40 weeks), respectively. These later attendance and engagement measures served as indicators of the latent construct "Engagement 2 (21-40 weeks)" in the evaluation of the hypothesized structural model.

CHAPTER 4:

Results

The study results are organized generally under two headings: Preliminary analyses and hypothesis testing. Preliminary analyses report the sample characteristics, the nature of relations among study variables, the identification of potential demographic covariates, and the examination of hypothesized independent variables prior to inclusion in statistical models testing study hypotheses. Hypothesis testing reports the results of statistical analyses in the order of study hypotheses 1 – 4. Hypothesis 4 posits a structural model of participant engagement and sense of community with the intervention program. For this hypothesis, special data screening and preparation were required and these details precede the result of testing the hypothesized structural model for fit to the data.

Preliminary Analyses

Sample descriptives. Sample demographics are summarized for the entire sample and for the intervention and control group sub-samples in Table 3. Seventy-one percent of the sample was between the ages of 18-24; since participants were recruited following childbirth, the youthfulness of the sample was expected. Nearly 2/3 of the sample had earned a high school diploma or a GED, but only ten percent of the sample had attained education beyond high school. Nearly 90% of the sample was African American and 10% of participants indicated they were of Hispanic ethnicity. Most participants had never been married; however, 16.6% indicated they were married at baseline. Since being on Medicaid was an eligibility requirement, it was expected that mothers would be of lower income. Twenty-eight participants elected not to respond to income questions. Fifty-eight percent of the sample reported an annual income of less than $20,000; the mean number of persons

dependent on the income was 4.40 (SD=1.69). Thus, consistent with expectations, the sample was predominantly poor. There were no mean differences between intervention and control mothers on actual annual income (Table 3.) or the number of persons dependent on the reported income [$F(1, 260) = 1.88$, p=ns]. Additionally, there were no mean differences between intervention and control mothers on the ratio of income level to number of dependents on the income [$F(1, 259) = 1.76$, p=ns].

Table 3. Demographic Characteristics of Study Participants and by Intervention Status.

Demographic	**N**	**Total Sample (N = 289)**	**Intervention (N = 173)**	**Control (N = 116)**	**F (X^2)**	**p**
Age						
18-24	289	70.6% (204)	70.5% (122)	70.7% (82)	.07	.79
25-34		27.7% (80)	27.2% (47)	28.4% (33)		
35-44		1.7% (5)	2.3% (4)	0.9% (1)		
Income						
Less than 10K	261	23.8% (62)	19.5% (31)	30.4% (31)	1.81	.18
Less than 20K		34.1% (89)	38.4% (61)	27.5% (28)		
Less than 30K		19.2% (50)	18.2% (29)	20.6% (21)		
Less than 40K		10.7% (28)	8.2% (13)	14.7% (15)		
40K or more		12.3% (32)	15.7% (25)	6.9% (7)		
Highest Degree Earned						
None	289	27.7% (80)	29.5% (51)	25.0% (29)	1.15	.28
HS GED		7.6% (22)	8.1% (14)	6.9% (8)		
HS Diploma		54.3% (157)	53.2% (92)	56.0% (65)		
More than HS		10.4% (30)	9.2% (16)	12.1% (14)		
Ethnicity						
Hispanic	289	10.4% (30)	10.4% (18)	10.3% (12)	(.00)	.99
Non-Hispanic		89.6% (259)	89.6% (155)	89.7% (104)		
Race						
Black	288	89.2% (257)	88.4% (152)	90.5% (105)	.06	.81
White		6.9% (20)	8.1% (14)	5.2% (6)		
Other		3.8% (11)	3.5% (6)	4.3% (5)		
Marital Status						
Never Married	289	76.5% (221)	79.8% (138)	71.6% (83)	2.75	.10
Sep., Divorce, or Widow		6.9% (20)	6.4% (11)	7.8% (9)		
Married		16.6% (48)	13.9% (24)	20.7% (24)		
Number of Children in Household						
Study Child only	289	30.1% (87)	35.8% (62)	21.6% (25)	.74	.39
One additional child		26.3% (76)	22.0% (38)	32.8% (38)		
Two additional children		21.1% (61)	19.7% (34)	23.3% (27)		
Three additional children		13.8% (40)	12.1% (21)	16.4% (19)		
≥ Four additional children		8.7% (25)	10.4% (18)	6.0% (7)		

Notes: 1. Sample sizes vary on income and racial group due to missing data.
2. Percentages may not add to 100% due to rounding.

Assessment attrition analyses. A total of 289 mothers completed the baseline assessment. Of these, 268 completed the 6 month assessment (93%) and 268 completed the 12 month assessment (93%). In some cases, participants who did not complete the 6 month assessment opted to complete the 12 month assessment and vice versa. An attrition analysis comparing participants who completed all waves of data collection (n=252) in the first year of the study to those who did not complete all three waves of data collection (n=37) was conducted for all study demographics. No significant differences were noted for any demographic characteristics between those who completed all waves of data collection and those who did not. However, women who completed all assessments in the first year had a slightly higher mean number of children under 18 in their home (M=2.50, SD=1.32) than those participants who failed to complete all of the assessments (M=2.11, SD=.97), $F(1, 287) = 3.34$, $p=.07$.

Means and standard deviations for study variables, total sample. The means and standard deviations of all study measures are presented in Table 4. The SCI-Legacy scale and subscale means indicated positive ratings of SOC with Legacy among study participants. Additionally, the SCI-Neighborhood scale and subscale means reflected moderate/neutral ratings of SOC with participants' neighborhoods. The sample had a mean score of roughly 40 on the social support satisfaction scale indicating positive levels of satisfaction; however, the standard deviation of social support satisfaction indicated substantial variability across respondents. Across all measures of self-efficacy, mothers in the sample reported mean levels of self-efficacy in the lower half of these scale ranges. The mean of stressful life events in this study indicated that, on average, study participants had experienced nearly 4 stressful life events in the previous 12 months prior to entering the Legacy study.

Table 4. Description of Study Measures and Baseline Summary Statistics, Total Sample.

Study Construct and Measures	No. Items	Range	Mean	SD
Total SCI-Neighborhood	10 items	10 – 50	30.45	7.28
- Emotional Connection w/ Neighborhood	5 items	5 – 25	15.35	4.31
- Reciprocal Relationships	5 items	5 – 25	15.10	3.75
Total SCI-Legacy (6 months)	11 items	11 – 55	43.40	5.29
- Emotional Connection w/ Group	5 items	5 – 25	20.98	2.34
- Reciprocal Group Influence	3 items	3 – 15	11.39	2.17
- Commonality w/ Group	3 items	3 – 15	11.03	1.92
Social Support Satisfaction	10 items	10 – 50	39.58	8.27
General Self-Efficacy	17 items	14 – 238	182.8	34.1
Maternal Self-Efficacy	12 items	12 – 48	15.97	3.60
Parental Competence (PSI)	11 items	11 – 55	23.51	3.81
Stressful Life Events (grouped)	19 items	1 – 8	3.72	2.28

Note: 1. All measures reported here were taken at baseline unless otherwise specified.
2. SCI Measures were taken at multiple time points; the first measurement is reported above.

Participant attendance and engagement descriptive statistics for the entire intervention sample are presented in Table 5. Overall, intervention participants attended roughly half of the sessions possible although the mean number of sessions appears to decline over time. Among the sub-sample of mothers who ever attended Legacy sessions (16 mothers were randomized to intervention but never attended sessions in the first year of the program), mean attendance is slightly higher than the entire intervention sample attendance but also appears to decline over time. Mean total attendance in group sessions was roughly 50% over the first year of the intervention.

Similarly, mean engagement scores are also presented in Table 5. Group leader ratings of mothers' engagement were only completed if a mother attended in a given 10-week period; mothers without an engagement score were assigned a low engagement score. Since mean attendance in groups was declining over time, the pattern of declining engagement scores reflects the inclusion of non-attending mothers' low engagement score. Overall, mean engagement ratings demonstrate moderate levels of engagement in the group but notable variability across participants.

Table 5. Descriptives for Intervention Participant Attendance and Engagement Measures.

Study Variables	Range	All Intervention	Ever Attended
		Mean (SD)	Mean (SD)
Attendance by Time Period			
Time 1 (first 10 weeks)	0 – 10	5.32 (3.61)	5.86 (3.34)
Time 2 (second 10 weeks)	0 – 10	4.85 (3.79)	5.34 (3.63)
Time 3 (third 10 weeks)	0 – 10	4.25 (3.88)	4.86 (3.82)
Time 4 (fourth 10 weeks)	0 – 10	4.19 (3.93)	4.62 (3.87)
Total Attendance-Year 1	0 – 40	18.61 (13.10)	20.50 (12.25)
Parent Engagement Form Rating (PEF)			
PEF—(first 10 weeks)	10 – 70	40.07 (18.11)	43.13 (16.11)
PEF—(second 10 weeks)	10 – 70	39.00 (18.70)	41.96 (17.04)
PEF—(third 10 weeks)	10 – 70	36.19 (19.80)	38.85 (18.83)
PEF—(fourth 10 weeks)	10 – 70	35.62 (20.16)	38.26 (19.34)
Sample		N=173	N=157

Correlations among study variables, total sample. To determine relations between study variables, bivariate correlations among the study measures of sense of community with Legacy, baseline psychological variables (social support satisfaction, stressful life events, and multiple measures of self-efficacy), and participant demographics were examined in the total sample (N=289). The correlations among these variables are presented in Table 6. Pearson correlations between the dependent variables of interest (SCI measures) and hypothesized independent variables were first examined. As expected, the measure of sense of community with Legacy was strongly correlated across time points (r = .52). Significant relations between SCI-Legacy at one or both time points and two demographic variables were also noted; number of children under 18 in household (r = .13) and income level (r = -.16, -.15) were correlated with SCI-Legacy ratings. As income level decreased, ratings on the SCI-Legacy increased at both time points. The number of children under age 18 in the household was positively correlated with SCI-Legacy at the 6 month rating but not at the 12 month rating. The correlation of SCI-Legacy with the number of children in the home suggested that as the number of children in the home increased, so did ratings of sense of

community with the Legacy program at the 6 month rating. Differences in the SCI-Legacy 6 month rating by marital status and educational level were examined using ANOVA. The between groups factors in separate ANOVAs were marital status (recoded into two groups, never married versus formerly/currently married) and educational attainment group. There were no significant effects of marital status, $F(1, 265) = 2.92$, $p = n.s.$, or educational level, $F(3, 263) = 2.38$, $p = n.s.$, on SCI-Legacy 6 month ratings.

Table 6. Correlations among Study Variables and SOC Measures, Total Sample.

Study Measures and Participant Demographics	N 289	1	2	3	4	5	6	7	8	9	10	11
1. SCI-Legacy 6mth	267	-										
2. SCI-Legacy 12mth	262	52	-									
3. Social Support Satis.	289	11	03	-								
4. Stressful Life Events	289	-02	-04	-14	-							
5. General Self Efficacy	289	10	08	38	-10	-						
6. Parental Competence	289	09	08	14	-03	30	-					
7. Maternal Self-efficacy	288	-16	-17	-02	08	04	01	-				
8. Age Group	289	00	-05	-07	-02	-00	19	04	-			
9. Race	288	-09	-09	-08	01	-04	-10	03	-03	-		
10.Hispanic Ethnicity	289	02	05	-04	-04	-03	06	02	10	-59	-	
11.Income Level	289	-16	-15	07	08	05	-03	01	-07	-02	-00	-
12.# Children in Home	289	13	03	-08	-03	-09	02	02	12	-05	11	-27

Note: 1. All values multiplied by 100. Correlation coefficients $\geq |.12|$ are significant at $p < .05$.
2. Variables 1.-10. are scaled positively such that higher scores indicate higher levels of the indicator. Remaining variables are scaled as follows: Age Group (1=18-24, 2=25-34, 3=35-44); Race (1=Black, 2=White, 3=Other); Hispanic Ethnicity (1=Yes, 2=No); Income level is a ratio of income to # of dependents; and Number of Children under 18 living in home (1=Study child only, 2=Two children, 3=Three children, 4=Four children, 5=Five or more children).

Contrary to expectations, social support satisfaction, number of stressful life events, general self-efficacy, and parental competence were not significantly correlated to SCI-Legacy at any time point. However, ratings of maternal self-efficacy were significantly correlated with SCI-Legacy 6 and 12 months but negatively (r = -.16 and -.17, respectively); such that as perceived maternal self-efficacy decreased, sense of community with the Legacy program increased.

Correlations of study variables and initial attendance and engagement ratings, intervention sample. To explore relations among potential demographic covariates, baseline psychological variables, and initial levels of attendance and engagement among intervention participants (n = 173), bivariate correlations were analyzed. Correlations among study variables of interest and potential demographic covariates are presented for the intervention sample in Table 7.

Contrary to hypothesized relations, few baseline psychological variables were strongly correlated with initial attendance and engagement ratings. Initial attendance in Legacy groups was significantly correlated with income level (r = -.21) and the number of children in the home (r = .14). Initial engagement ratings were also significantly correlated with income level (r = -.15) but no other demographic variables. However, initial engagement ratings were also significantly and positively related to the number of stressful life events at baseline (r = .18); indicating that higher level of stressful life events in the previous year were related to higher levels of initial engagement as rated by the group leader.

Differences in initial attendance and engagement ratings by marital status and educational level were examined using ANOVA. The between groups factors in separate ANOVAs were marital status (recoded into two groups, never married versus formerly/currently married) and educational attainment group. There were no significant effects of marital status, $F(1, 171) = 0.17$, p = *n.s.*, or educational level, $F(3, 169) = 0.65$, p = *n.s.*, on initial levels of attendance in Legacy. Additionally, there were not significant effects of marital status, $F(1, 171) = 0.05$, p = *n.s.*, or educational level, $F(3, 169) = 0.24$, p = *n.s.*, on initial engagement ratings.

Table 7. Correlations among Baseline Participant Characteristics and Initial Levels of Engagement with LFC Intervention Participants.

Study Measures and Participant Demographics	N	1	2	3	4	5	6	7	8	9	10	11
1. Attendance 1-20 wk	173	-										
2. Engagement 1-20 wk	173	82	-									
3. Social Support Satis.	173	-11	-06	-								
4. General Self Efficacy	173	00	07	47	-							
5. Parental Competence	173	01	01	19	36	-						
6. Maternal Self-efficacy	172	05	06	00	04	03	-					
7. Stressful Life Events	173	09	18	-17	-10	-05	01	-				
8. Age Group	173	00	04	-13	-02	13	05	08	-			
9. Race	172	02	05	-05	-02	01	-03	08	-06	-		
10.Hispanic Ethnicity	173	04	-01	00	-03	03	10	-02	10	-63	-	
11.Income Level	173	-21	-15	14	07	-02	06	07	-08	03	-01	-
12.# Children in Home	173	14	04	-19	-11	02	02	-02	21	-01	07	-36

Note: 1. All values multiplied by 100. Correlation coefficients $\geq |.15|$ are significant at $p < .05$.
2. Variables 1.-12. are scaled positively such that higher scores indicate higher levels of the indicator. Remaining variables are scaled as follows: Age Group (1=18-24, 2=25-34, 3=35-44); Race (1=Black, 2=White, 3=Other); Hispanic Ethnicity (1=Yes, 2=No); Income level is a ratio of income to # of dependents; and Number of Children under 18 living in home (1=Study child only, 2=Two children, 3=Three children, 4=Four children, 5=Five or more children).

Primary Analyses

First, mean differences in sense of community with the Legacy program were examined between groups and over time. Only participants with complete data at both time points (6 and 12 month) were included in these analyses. In hierarchical regression analyses (Cohen & Cohen, 1983), demographic variables significantly correlated with the dependent variables of interest were entered in regression models in Step 1 to control for their effects. Potential demographic covariates were identified for each respective hypothesis and, consequently, differ from model to model. All hypotheses posit the independent variables of baseline social support satisfaction, stressful life events, and measures of self-efficacy (general, maternal, and parental competence) will explain significant proportions of the variance in dependent variables of interest. Regression models were first analyzed with all

five hypothesized independent variables included. However, for parsimony of final models, only those hypothesized independent variables exhibiting significant (or approaching significant) beta coefficients in the prediction of the dependent variable of interest were retained in final regression models. Similarly, the structural equation model hypothesized to fit the study data included only significant predictors of initial attendance and/or engagement (identified in testing Hypothesis 3.1) as observed baseline predictors of the latent variable "Engagement 1 (1-20 weeks)".

Hypothesis Testing

Research question 1. To test hypotheses 1.1 and 1.2 that intervention exposure would positively effect levels of sense of community with Legacy over time, changes in mean sense of community with the Legacy program were examined using ANOVA with repeated measures. Time (6 and 12 month) was the within-subjects factor and group (intervention vs. control) was the between subjects factor.

The time x intervention group interaction effect on mean levels of sense of community with the Legacy program reached significance, reflecting a lack of change in mean sense of community with Legacy from 6 to 12 months for the control group, but a decrease in sense of community with Legacy over the same time period for the intervention group (See Figure 2). Nevertheless, a main effect of intervention group indicated that the mean level of sense of community with Legacy remained slightly higher for participants in the intervention group than for controls (p =.07). Means and significance testing results are presented in Table 8 along with results of a similar analysis of SCI-Neighborhood presented immediately following SCI-Legacy findings.

Table 8. Mean differences on SCI, Legacy and Neighborhood.

	Time 1 Comp	Time 2 Comp	Time 3 Comp	Time 1 Int	Time 2 Int	Time 3 Int	Time	I/C	Time *I/C
Measure	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**F**	**F**	**F**
Total SCI-Legacy *N=252*	--	42.43 (4.89)	42.75 (4.84)	--	44.30 (5.53)	43.00 (5.44)	2.23	3.30+	6.10*
Emotional Connection	--	20.85 (2.09)	20.73 (1.76)	--	21.20 (2.50)	20.53 (2.44)	7.48*	0.09	3.49+
Reciprocal Grp Influence	--	10.75 (1.95)	10.77 (1.93)	--	11.24 (1.92)	10.83 (1.90)	2.55	1.69	3.07+
Commonality w/ Grp	--	10.83 (1.92)	11.25 (2.14)	--	11.86 (2.28)	11.64 (2.05)	0.54	9.69*	4.92*
Total SCI-Neighborhood *N=248*	30.20 (7.48)	30.09 (7.91)	30.64 (8.50)	30.46 (7.27)	30.92 (8.34)	31.68 (8.41)	1.80	0.65	0.40
Emotional Connection	15.33 (4.22)	15.33 (4.37)	15.48 (4.82)	15.28 (4.48)	15.77 (4.66)	16.18 (4.61)	1.92	0.53	1.02
Reciprocal Relationships	14.87 (3.94)	14.75 (4.15)	15.16 (4.25)	15.18 (3.64)	15.16 (4.37)	15.50 (4.24)	1.24	0.63	0.02

Note: 1. Notation for the Control Group is "Comp" or "C" and for the Intervention Group is "Int" or "I".
2. + $p \leq .10$, * $p \leq .05$

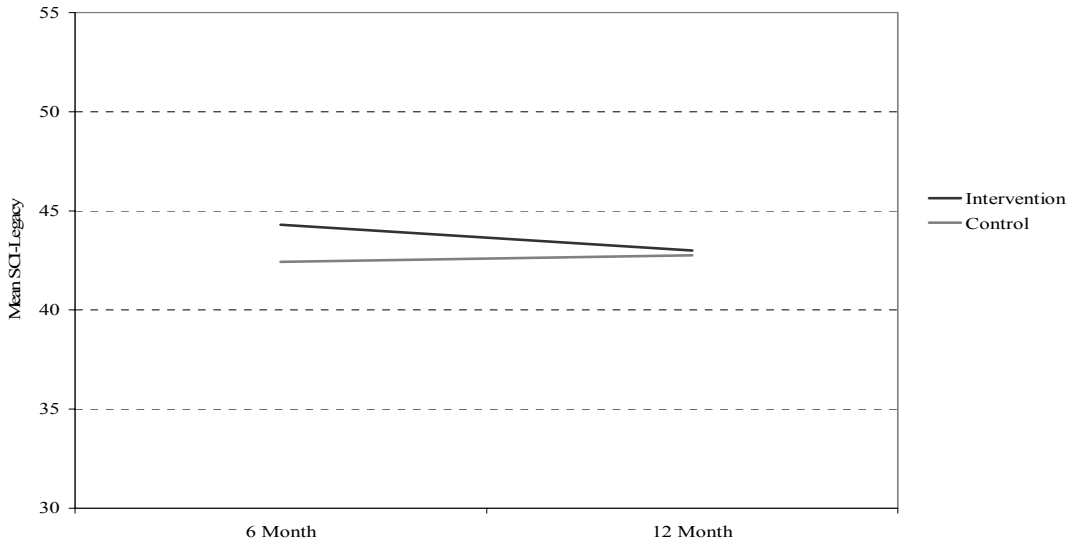


Figure 2. Mean SCI-Legacy Total by Intervention Group over Time.

To further explore the differing pattern of change in SCI-Legacy for control and intervention participants over time, these analyses were repeated for each of the SCI-Legacy subscales; Emotional Connection with Group, Reciprocal Group Influence, and Commonality with Group (See Figure 3). Results indicated that on the Emotional Connection with Group subscale, mean levels of emotional connection significantly declined over time for both groups; but more so for intervention participants than controls as indicated by the interaction of time x intervention group which approached, but did not reach, significance for this subscale. A group x time interaction approached, but did not reach, significance ($p = .06$) for the Reciprocal Group Influence subscale as well; such that intervention participants reported a slight decline in their sense of reciprocal influence in Legacy whereas the control group mean stayed essential the same. Lastly, a significant group x time interaction on the Commonality with Group subscale indicated that although there was a significantly higher mean level of commonality with Legacy among intervention participants as compared to controls, the control participants' mean level of commonality with Legacy increased over time whereas intervention participants' mean level decreased slightly over time.

The bar graphs of the means over time and by intervention group for the SCI-Legacy sub-scales indicated a common pattern of mean changes over time. Specifically, the intervention group's sense of community with Legacy tended to decline slightly from 6 months to 12 months while the control group remained about the same or increased slightly on these measures. The Commonality with Group subscale was the only component of the total sense of community with Legacy measure to demonstrate significant between group effects. This finding, in particular, suggests that the commonality with group dimension of

sense of community with Legacy may be sensitive to aspects of the intervention program in that program participants indicate a higher level of commonality with Legacy than control mothers at both time points.

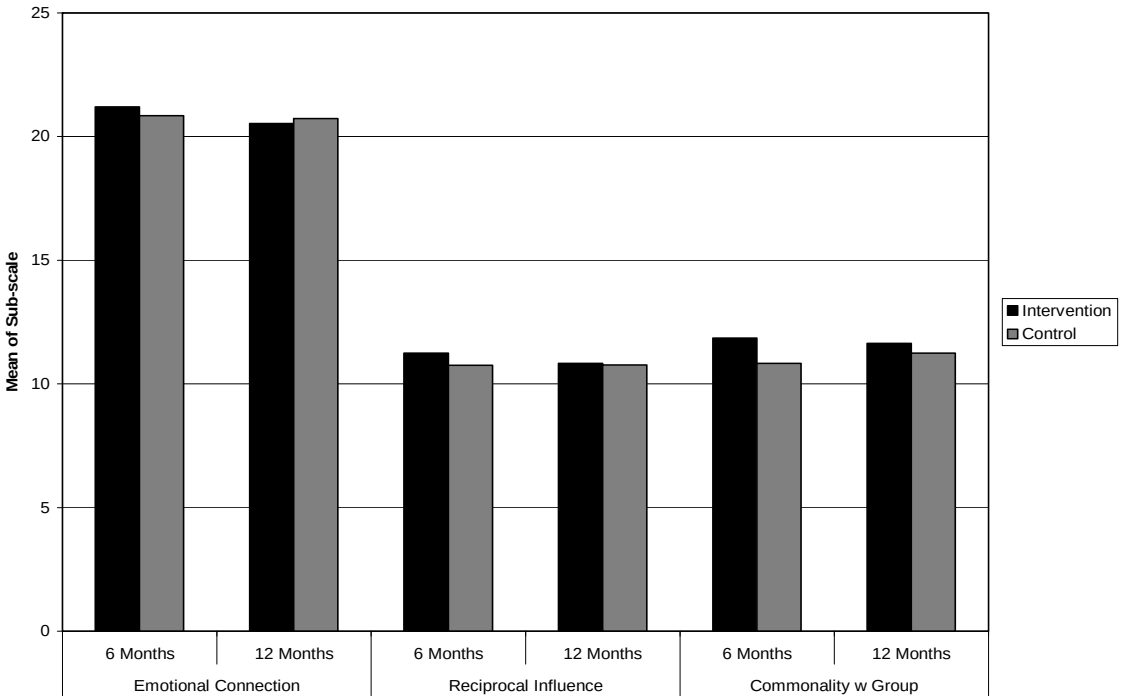


Figure 3. Mean of SCI-Legacy Subscale by Intervention Group over Time

A similar analysis was performed that compared mean levels of SCI-Neighborhood over time and by intervention group. The reason for conducting this analysis was to assess the possibility that changes in study participants' sense of community with Legacy were a reflection of an overall pattern of change in sense of community regardless of the referent community. To examine this alternate explanation, sense of community with one's neighborhood served as a control construct against which patterns of change over time on the SCI-Legacy were juxtaposed. Changes in mean ratings of sense of community with neighborhood were examined using ANOVA with repeated measures. Time (baseline, 6

month, and 12 month) was the within-subjects factor and group (intervention vs. control) was the between subjects factor. Results indicated there were not significant between group effects, within group effects, or group x time interaction effects at any time point for the total scale or for either of the two subscales (as determined in separate ANOVA's with repeated measures). Table 8 presents means by time and group and *F* values for the SCI-Neighborhood total scale and its two subscales. The lack of changes in the SCI-Neighborhood means over time supports the stability of sense of community with neighborhood over the 12 month period and suggests that the changes in sense of community with the Legacy program noted previously most likely were not a product of a general pattern of change in participants' sense of community with any referent community over the time period of interest.

Research question 2. To examine hypotheses 2.1 and 2.2 that baseline psychological variables social support satisfaction, stressful life events, and measures of self-efficacy (general, maternal, and parental competence) will significantly contribute to the explained variance in sense of community with the Legacy program at 6 and 12 months, hierarchical regression was utilized. Two demographic variables were correlated significantly with SCI-Legacy: Income level and number of children under 18 in the home. These potential covariates were entered in both the full initial and reduced final regression models to control for their effects.

An initial regression model testing the contribution of all hypothesized independent variables on SCI-Legacy at 6 months was first examined. Contrary to the hypothesis, baseline stressful life events, general self-efficacy, and parental competence were not significant predictors of sense of community with Legacy at 6 months. However, social

support satisfaction, maternal self-efficacy, and intervention status were supported as predictors in this model. In a reduced final model predicting sense of community with the Legacy program at 6 months (SCI-Legacy), the independent variables social support satisfaction and maternal self-efficacy were entered in Step 2. Intervention group (control or intervention) was entered in the Step 3. Since intervention status was a significant predictor of levels of sense of community with the Legacy program at 6 months, tests for moderation of maternal self-efficacy and social support satisfaction by intervention exposure were conducted. These interaction terms (using centered variables) were entered in Step 4 of the final model. In this (and subsequent) regression models, pairwise deletion was employed to adjust analyses on a case by case basis for variables with missing values due to participant attrition at the 6 month assessment.

Regression results indicated that after controlling for demographic covariates, maternal self-efficacy levels negatively contributed to the SCI-Legacy rating at 6 months while social support satisfaction positively contributed to the rating. Although it was hypothesized that maternal self-efficacy would contribute to SCI-Legacy ratings at 6 months, the direction of the effect was opposite of that expected. However, the significance of the contribution of intervention group was consistent with hypotheses that intervention exposure would contribute positively to changes in SCI-Legacy ratings; and the significance of social support satisfaction was also consistent with hypotheses that it would positively contribute to explained variance in sense of community with Legacy at 6 months. The total model, before interaction terms were included, explained about 11% of the variance in sense of community with Legacy 6 month ratings.

To test the hypothesis that intervention exposure would moderate predictors of sense of community with the Legacy program at 6 months, the interaction terms of maternal self-efficacy x intervention group and social support satisfaction x intervention group were added to the model and entered in Step 4. Results are reported in Table 9 and indicated that the maternal self-efficacy x group interaction beta approached significance (p = .06); however, the social support satisfaction x group interaction was not significant. The addition of the interaction terms resulted in a change in model R^2 that approached significance (ΔR^2 = .016, p = .09).

Table 9. Maternal Self-Efficacy and Social Support Satisfaction Predicting SCI-Legacy for Children Total Scale Score, 6 and 12 Month Ratings.

Model Step **Variable**	**SCI-Legacy 6 month** **β**	**SCI-Legacy 6 month w/ Interactions** **β**	**SCI-Legacy 12 month** **β**
Step 1			
Income Level	-.156*	-.171**	-.072
No. of Children	.108+	.115+	-.060
ΔR^2	.034**	.034*	.022+
Step 2			
SCI-Legacy 6 month	--	--	.516**
ΔR^2	--	--	.254**
Step 3			
Maternal Self-efficacy (MSE)	-.168**	-.316**	-.083
Social Support Satisfaction (SS)	.126*	.039	-.031
ΔR^2	.041*	.041**	.008
Step 4			
Intervention status (I/C)	.200**	.204**	-.069
ΔR^2	.040**	.040**	.005
Step 5			
MSE x I/C	--	.184+	--
SS x I/C	--	.110	--
ΔR^2	--	.016+	--
R^2 *Final*	.114**	.131**	.289**

Note: 1. Intervention status was coded, Control=0 and Intervention=1.
2. + $p \leq .10$, * $p \leq .05$; ** $p \leq .01$

To explore further the nature of this interaction trend, regression equations for the intervention and control groups were derived and change in the standardized SCI-Legacy 6

month scores was determined for mothers indicating low maternal self-efficacy (1 SD below the standardized mean scores) versus those indicating high maternal self-efficacy (1 SD above the standardized mean scores).

Figure 4 displays a graph of the interaction effect of intervention and maternal self-efficacy on changes in sense of community with the Legacy program at 6 months. The interaction suggests that the effect of baseline maternal self-efficacy on levels of SCI-Legacy at 6 months was slightly different for intervention participants than for controls. For mothers in the intervention group, having low maternal self-efficacy ratings at baseline resulted in higher SCI-Legacy ratings while having high maternal self-efficacy ratings resulted in lower but still positive SCI-Legacy ratings. For mothers in the control group, having low maternal self-efficacy ratings at baseline resulted in higher SCI-Legacy ratings similar to those of the intervention group; however, having high maternal self-efficacy ratings resulted in lower SCI-Legacy ratings for control participants. The interaction suggested that the negative

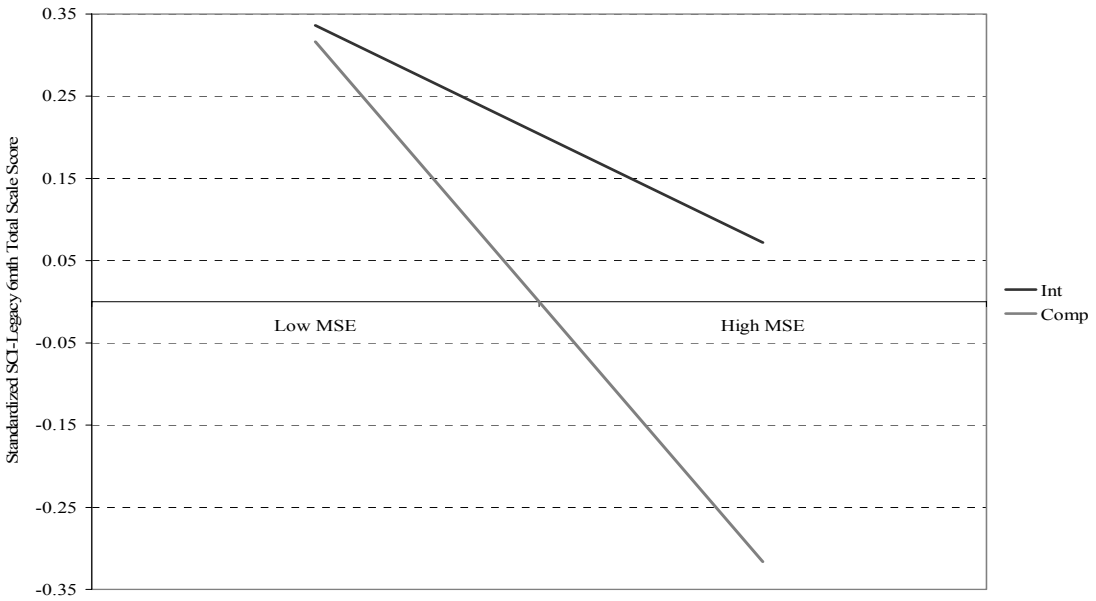


Figure 4. Interaction of Intervention Group by Maternal Self-Efficacy on SCI-Legacy 6 Month Scale Score.

effect of high levels of maternal self-efficacy at baseline on ratings of sense of community with Legacy at 6 months was slightly, but not significantly, attenuated by exposure to intervention.

To test hypothesis 2.2 that intervention exposure and psychological independent variables would continue to predict levels of sense of community with the Legacy program at 12 months, hierarchical regression modeling was again utilized. The regression model was identical to the final SCI-Legacy 6 month model except that SCI-Legacy 6 month ratings were entered in Step 2 and followed by the independent variables in Step 3. Entering SCI-Legacy 6 month ratings prior to the independent variables tests whether or not predictors of SCI-Legacy 6 months explain additional variance in SCI-Legacy 12 month ratings. Results indicated that neither social support satisfaction nor maternal self-efficacy explained variance in SCI-Legacy 12 month ratings after 6 month ratings were controlled. Also contrary to hypotheses, intervention status was not a significant predictor of SCI-Legacy 12 month ratings after controlling for 6 month ratings. The final regression model predicting SCI-Legacy 12 month ratings is reported in Table 9.

Research question 3. To examine hypothesis 3.1 that intervention group participants' baseline levels of the psychological variables (social support satisfaction, stressful life events, general self-efficacy, parental competence, and maternal self-efficacy) will significantly predict initial levels of program attendance and engagement, hierarchical regression analyses were conducted.

Initial analysis examined mean differences in annual attendance and initial engagement ratings for the 12 groups and 4 group leaders using ANOVAs. The between group factors were parent group membership and assigned group leader. There were no

significant effects of parent group, $F(11, 161) = 1.55$, $p = n.s.$, or group leader, $F(3, 169) = 2.33$, $p = .08$, on annual attendance in Legacy. Additionally, there were no significant effects of group leader on initial engagement ratings (1-20 weeks), $F(3, 169) = 1.44$, $p = n.s.$ These findings suggest that individual characteristics of groups and/or group leaders did not influence annual attendance for individual participants or patterns of initial engagement ratings across group leaders. Consequently, neither parent group nor group leader was included in the following regressions predicting initial levels of attendance and engagement.

Correlations between the dependent variables (initial attendance and engagement ratings) and demographic variables were examined to identify potential demographic covariates. Income level was significantly correlated with initial levels of attendance and initial engagement ratings. The number of children in the home was significantly correlated with initial attendance in Legacy but not with initial engagement ratings. Therefore income level was entered in Step 1 of both the regression model predicting initial attendance and the regression model predicting initial engagement ratings. The number of children in the home was also included in Step 1 of the regression model predicting initial attendance.

In both initial regression models, all five hypothesized independent variables were entered in Step 2. Contrary to hypotheses, only one of these independent variables, stressful life events, was a significant predictor of initial engagement ratings; while none of the hypothesized predictors were significant contributors to initial attendance. The two regression models were reduced to include only significant predictors of each dependent variable in final regression models (Table 10). The regression predicting initial attendance in Legacy included only two demographic predictors and explained nearly 5% of the variance in initial levels of attendance. The regression predicting initial engagement scores included

income level and stressful life events as predictors, and the model explained nearly 6% of the variance in initial engagement scores. Results indicated that decreases in income level significantly contributed to increases in attendance and engagement ratings in the first 20 weeks of the Legacy groups. Higher levels of baseline stressful life events also positively predicted levels of initial engagement.

Table 10. Participant Characteristics Predicting Initial Levels of Attendance and Engagement in LFC.

Model Step **Variable**	**Attendance** 1-20 wk **β**	**Engagement** 1-20 wk **β**
Step 1		
No. Children in home	.079	--
Income Level	-.178*	-.166*
ΔR^2	.048*	.023*
Step 2		
Stressful Life Events	--	.189*
ΔR^2	--	.035*
R^2 *Final*	.048*	.058**

$+p \leq .10$; * $p \leq .05$; ** $p \leq .01$

Research question 4. The structural model presented in Hypothesis 4 and in Figure 1 posited that sense of community with Legacy related to participant engagement over time and that engagement related to fostering a sense of community with the Legacy program over time. To test the hypothesis, structural equation modeling (SEM) was utilized and analyses were conducted in the LISREL 8 program (Jöreskog & Sörbom, 1996). As hypothesized, the structural model was a hybrid model with structural and measurement components (Kline, 1998). The model included latent variables and one-way directional effects making it a recursive model.

Results from research question 3 were used to adjust the hypothesized model components before conducting analyses. Specifically, not all hypothesized independent

variables significantly contributed to changes in SCI-Legacy scores or the first block of attendance and engagement ratings (1-20 weeks of the program). Therefore, only those variables having significant linear relations with initial attendance and/or initial engagement remained in the hypothesized structural model. The hypothesized model maintains the temporal assumptions of causation in that the latent variables of engagement are assumed to precede the latent variables of sense of community at each respective time point. The final hypothesized structural model is presented in Figure 5.

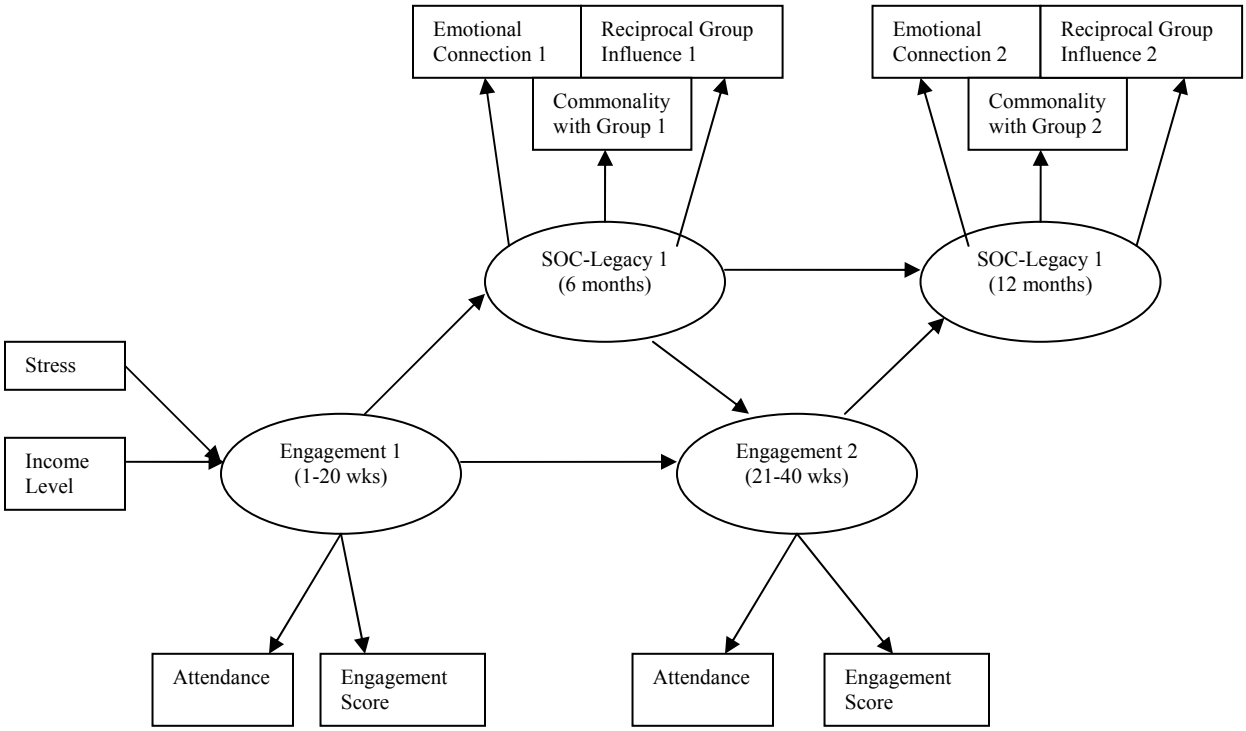


Figure 5. Final Hypothesized Structural Model Relating Sense of Community with Legacy and Engagement over Year 1 of the Intervention.

Structural equation modeling programs such as LISREL are very sensitive to missing values; in fact, all cases in the analyzed sample must have complete data or model estimation may be unreliable or not possible. There are three options available for dealing with missing

data in SEM analyses: Listwise deletion, pairwise deletion, or imputation or replacement of missing data (Kline, 1998). Listwise deletion dramatically reduces the sample size and compromises generalizability while pairwise deletion would remove those participants with missing data from individual analyses on a case by case basis. Although pairwise deletion seems most appropriate, SEM relies on analysis of covariance for a given sample size and differing sample sizes per variable produces unbalanced covariance matrices—a critical problem for statistical analysis of covariance matrices. Lastly, imputing or replacing missing data offers an alternative solution; however, imputing dependent variables presents the challenge that perhaps the replacement values do not accurately substitute for values a participant would have given if they had completed the scale.

Since the relevant missing data occurred in the dependent variable of interest, this study utilized listwise deletion of missing values in the analysis of the structural model. Specifically, participants who did not complete both the 6 and 12 month sense of community measures (i.e. those mothers who did not complete the 6 and/or 12 month assessments) were dropped. Of the 173 intervention participants, 9 mothers did not complete both assessment points and 15 mothers completed either the 6 or 12 month assessment but not both. Those 24 mothers were dropped from the analysis of the structural model leaving a total sample of 149 who were included in the model (86% of the intervention sample).

After determining the final sample for SEM analysis, screening of the dataset revealed a potential problem for model fitting; the range of variances on measures were noticeably different for several variables relative to the rest. In particular, the scale and range for the engagement ratings was quite large and produced much larger variance estimates than other indicators. Additionally, the income level variable and attendance variables also had a

much larger variance estimate than the other indicators. SEM is sensitive to non-equivalent variances and mild to moderate deviations in normality (e.g. when the scale of variables differs dramatically between variables included in the model, variance estimates may also differ dramatically in magnitude). Non-equivalent variances are particularly troublesome for maximum likelihood estimation and may result in inability to converge on a solution or in poor fit to the data (West, Finch, & Curran, 1995). To avoid this difficulty, it is recommended that transformation and rescaling of problem variables be conducted prior to analysis (Kline, 1998) or if problems are apparent throughout the dataset, estimation procedures that do not assume multivariate normality should be utilized (Kline, 1998; Russell, Kahn, Spoth, & Altmaier, 1998).

To address non-equivalent relative variances in the current sample and as suggested by Kline (1998, p. 81-89), the engagement ratings, attendance scores, and income level indicators were transformed for analyses by taking the square root of the true values. Additionally, the income level variable was also rescaled by multiplying the transformed values by five. The rescaling of income in this way does not change its correlation with other variables but adjusts the scale of its variance estimates to be five times the transformed values. These transformations created variance estimates that were commensurate in scale with other study variables but did not change the nature of relations among the variables.

The hypothesized model in Figure 5 was tested for fit to the data using standard procedures and maximum likelihood estimation (Jöreskog & Sörbom, 1993). The latent variables were comprised of observed measurements (Sense of Community with Legacy was comprised of the 3 SCI-Legacy subscale scores and Engagement was comprised of two observed variables, actual attendance and parent engagement ratings) at each respective time

point. Correlations among the model variables were first examined and are presented in Table 11. The relations among the variables indicated structural modeling was possible because strong and significant correlations existed between most all variables in the hypothesized model. Means and standard deviations for all model variables (transformed variables were noted as such) are also presented in Table 11.

Table 11. Correlations, Means, and Standard Deviations of Study Variables Included in Structural Model Testing, N=149.

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1. Income Level (transformed, rescaled)	-											
2. Stressful Life Events	.10	-										
3. Attendance 1-20 wk (transformed)	-.23	.12	-									
4. Engagement 1-20 wk (transformed)	-.20	.17	.87	-								
5. Attendance 21-40 wk (transformed)	-.14	-.04	.70	.60	-							
6. Engagement 21-40 wk (transformed)	-.09	-.01	.67	.62	.91	-						
7. SCI Emotional Subscale -6 month	-.22	-.01	.25	.19	.25	.20	-					
8. SCI Commonality Subscale -6 month	-.20	-.02	.25	.25	.30	.24	.60	-				
9. SCI Influence Subscale -6 month	-.23	.03	.28	.22	.20	.15	.54	.39	-			
10.SCI Emotional Subscale -12 month	-.13	-.02	.16	.14	.26	.21	.49	.23	.27	-		
11.SCI Commonality Subscale -12 month	-.22	.00	.24	.20	.32	.29	.32	.34	.29	.63	-	
12.SCI Influence Subscale -12 month	-.14	-.01	.18	.18	.16	.13	.23	.15	.41	.50	.63	-
Mean	3.91	3.87	3.07	8.74	2.68	8.40	21.2	11.9	11.2	20.5	11.6	10.8
Standard Deviations	1.25	2.34	1.31	2.18	1.58	2.37	2.50	2.28	1.92	2.44	2.05	1.90

Note: Correlation coefficients $\geq |.16|$ are significant at $p < .05$.

The latent variables engagement and sense of community each had one indicator that was fixed in order to scale the latent construct (these are indicated in the model by the letter *f* following a path coefficient). The error variances of repeated measures were allowed to correlate for the sense of community indicators and the engagement scores to remove this variance in estimating effects; estimating and removing error variance(s) is a key strength to

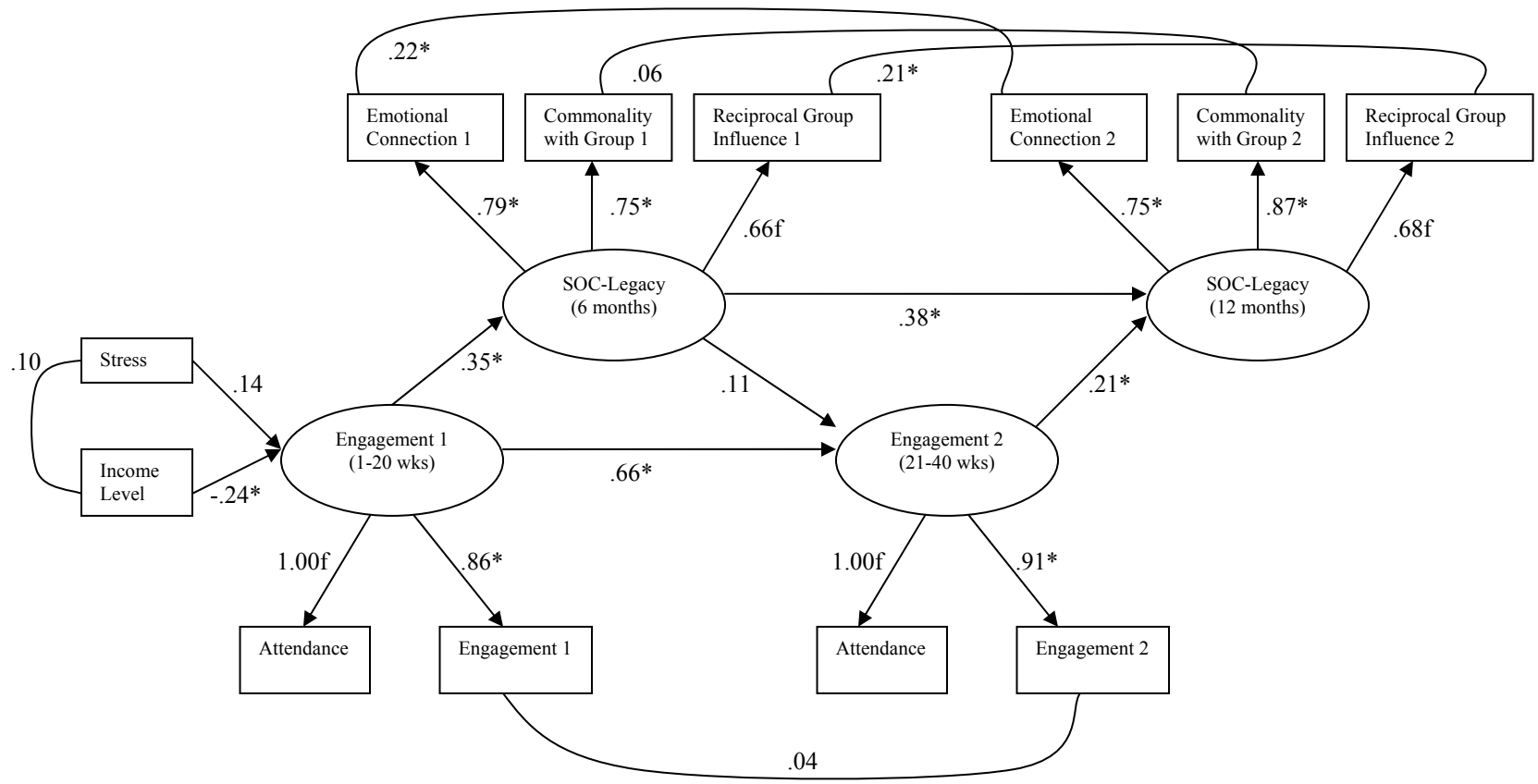
latent variable structural modeling and is recommended for longitudinal analyses with repeated measures (Russell, Kahn, Spoth, & Altmaier, 1998). The error variance of attendance was set to zero because the indicator did not contain measurement error as it was the actual enumeration of attendance in parent group sessions. Lastly, to ensure factor invariance in SOC latent variables over the two time points, the paths from the latent SOC variables to each of their respective indicators (SCI dimension scale scores) were constrained to be equal across measurement time points (e.g., the path from SOC-6 month to Emotional Connection at 6 months was constrained to be equal to the path from SOC-12 month to Emotional Connection at 12 months).

Results suggested the hypothesized model fit the data well; $X^2(48, N=149) = 48.14$, $p = .47$, GFI = .95, NFI = .96, SRMR = .06. The measurement portion of this hybrid model suggested that the three indicators of the latent variable 'sense of community' measure the construct adequately (strong path coefficients); this was also true for the latent variables of 'engagement' at both time points. An identical structural model with the equality constraints removed was also analyzed for fit to the data. Results from this analysis indicated the unconstrained model also fit the data well, $X^2(46, N=149) = 41.90$, $p = .64$, GFI = .96, NFI = .96, SRMR = .05. To statistically compare the two models, a chi-square difference test was conducted. The result of the test, $X^2_{\text{difference}}(2) = 3.12$, $p = n.s.$, suggested the unconstrained model did not have significantly better fit. Therefore, the latent SOC constructs were equivalent over time and the assumption of model factor invariance was supported (Horn & McArdle, 1992). The model with the equality constraints is presented as the final model.

The direct and indirect effects of variables and latent constructs are presented in Table 12. Overall, the model supported a significant direct effect of initial engagement in

Legacy on sense of community at 6 months. Similar to beta coefficients in regressions, the path coefficient indicated that increases in initial engagement of one standard deviation resulted in increases in sense of community at 6 months of .35 standardized units. The latent variable Engagement 1 predicted roughly 13% of the variance in SOC at 6 months. Contrary to hypotheses, sense of community with Legacy at 6 months did not significantly relate to increases in later engagement with the program. However, consistent with hypotheses, later engagement (Engagement 2) did predict sense of community at 12 months; increases in later engagement of one standard deviation resulted in increases in sense of community at 12 months of .21 standardized units. The latent variables SOC at 6 months and Engagement 2 predicted roughly 25% of the variance in SOC at 12 months.

As expected, initial engagement in Legacy was strongly related to later engagement in Legacy such that increases in initial engagement of one standard deviation resulted in increases in later engagement of .66 standardized units. Similarly, SOC with Legacy at 6 months predicted SOC with the program at 12 months. The total effects of observed variables at baseline and latent variables in the model were calculated by summing the direct and indirect effects identified by path tracing; these total effects are also presented in Table 12. The final model and path estimates are presented in Figure 6.



$X^2(48, N=149) = 48.14, p = .47$

Note: * $p < .05$; '*f*' denotes fixed path to scale latent variable.

Figure 6. Structural Model of Engagement and Sense of Community with Legacy, Standardized Solution (N=149).

Table 12. Decomposition of Standardized Effects for the model of Engagement and Sense of Community with Legacy in Year 1 of the Intervention.

Variables	Engagement 1	SOC 1	Engagement 2	SOC 2
Income				
Direct Effect	-.24*	--	--	--
Indirect via Engagement 1	--	-.08*	-.16*	--
Indirect via Engagement 1 and 2	--	--	--	-.03*
Total Effect	-.24*	-.08*	-.16*	-.03*
Engagement 1				
Direct Effect	--	.35*	.66*	--
Indirect via SOC 1	--	--	.04[nt]	.13*
Indirect via Engagement 2	--	--	--	.14*
Total Effect	--	.35*	.70*	.27*
SOC 1				
Direct Effect	--	--	.11	.38*
Indirect via Engagement 2	--	--	--	.02[nt]
Total Effect	--	--	.11	.40*
Engagement 2				
Direct Effect	--	--	--	.21*

Note: Indirect effects that are the product of significant direct paths are considered significant when summed for total effects (Kline, 1998). When one or more nonsignificant paths are multiplied for an indirect effect, the significance was not tested and is indicated by the superscript 'nt'.

CHAPTER 5:

Discussion

This study was built on previous work in the area of sense of community by examining the phenomenon of SOC in the context of a longitudinal, preventive intervention using an experimental design. The most important finding is that among intervention mothers, attendance and engagement in parenting groups over time contributed significantly and positively to sense of community with the program. This finding supports previous research which has suggested that sense of community is a critical byproduct of participation in self-help and learning community interventions (Bishop, Chertok, & Jason, 1997; Brodsky & Marx, 2001; Ferrari, Jason, Olson, Davis, & Alvarez, 2002; Laudet, Cleland, Magura, Vogel, & Knight, 2004). Increases in SOC seen among intervention participants were further supported by the intervention group having a slightly higher mean SOC with the program than controls. However, levels of SOC with the program declined over time among intervention participants while stability or slight increases in SOC characterized control participants. Regardless of experimental condition, changes in SOC within the first year of the program were small in magnitude and suggest that changes in SOC between intervention groups may take more time to evaluate fully.

Engagement and Sense of Community with Legacy over Time

This study found that attendance and engagement with Legacy positively predicted SOC with the program at both measurement points within the first year of the program. In addition, the structural model indicated that engagement over the first 20 weeks of the program contributed indirectly to SOC at 1 year through later program engagement (21-40 weeks) and through SOC at 6 months. These results support, in part, the study hypotheses

that exposure to the intervention would relate to higher levels of SOC with the program. However, there was not a direct effect of SOC with Legacy at 6 months on levels of engagement with the program at 1 year.

The structural model demonstrated that, within the intervention group, SOC at 6 months predicted later SOC and, similarly, engagement at 6 months predicted later engagement. These findings of stability in both SOC and engagement over time are not surprising but provide support for the idea that early engagement in the program begets later engagement and, ultimately, may contribute to maintenance of SOC over time. The predictive value of engagement on SOC with Legacy was significant at both study time points but the magnitude of its contribution was relatively smaller at the latter time point. Thus, it appears that even after controlling the cross-sectional association of engagement with SOC early in the program, engagement continues to exert a small but significant and positive effect on *changes* in SOC by 12 months. On the other hand, if the decline in predictive power for initial engagement relative to later engagement is found in later assessments, such a finding might indicate a downward trend in predicting SOC beyond year 1 of the study. In other words, consistent attendance and engaged attitudes that are observable by program facilitators might have little to do with maintaining a sense of community with the program over the long term. A further possibility is that SOC might take on increased importance as a factor that contributes to maintaining engagement in the program. Such a possibility is consistent with a developmental perspective of the interplay between engagement and SOC with the program such that early in the intervention engagement builds SOC while later on perhaps SOC will predict long-term participant engagement. Future research should examine this possibility.

SOC with Legacy among Intervention and Control Groups

To date, this is the first study to examine changes in SOC over time among the same intervention participants and as compared to a control group. Chavis and Wandersman (1990) examined SOC with neighborhood at two time points but did not describe changes in the level of SOC among participants; Loomis and colleagues (2004) examined change in SOC before and after a threat to a university community but using independent samples rather than the same participants. Consistent with hypotheses, the intervention group indicated a slightly higher mean level of sense of community with Legacy than controls. The mean difference was carried by intervention participants endorsing higher ratings on the Commonality with Group dimension of SOC than controls. However, SOC appeared to decline over time for intervention participants. One explanation for the pattern of changes seen in SOC over time and between groups was ruled out by juxtaposing this pattern of change within Legacy to that of SOC within participants' neighborhoods. The fact that mothers' SOC with their neighborhoods was not declining over time and was not different by intervention group suggests the changes seen in SOC with Legacy are likely not related to general patterns of change in SOC with all relevant communities but rather, specific to Legacy.

A possible explanation for the decline in SOC among intervention participants is that participants may experience a sort of 'honeymoon' period early in the program when interpersonal connections are being formed and conflict has had limited time to develop. With the passage of time the likelihood of participants discovering differences with peer participants becomes greater and feelings about intervention program approaches develop. It is also possible that participants may try out parenting strategies discussed in Legacy but

become frustrated over time if they find those strategies difficult to implement or not supported in the family/home context. Participants who experience tension or conflict with family members around parenting strategies linked to Legacy may develop negative feelings toward the program and thereby lessen SOC. Intra-familial and inter-generational conflict around parenting practices has been documented among young African American mothers who are living with their mother or grandmother (McLoyd, 1990).

In the scenarios noted above, a critical assumption is made: that these issues take time to surface. However, it is reasonable to assume, as others have in group-based intervention settings and self-help groups (Ferrari, Jason, Olson, Davis, & Alvarez, 2002; Maton, Leventhal, Madara, & Julien, 1989), that a group's SOC evolves and develops with the passage of time and may become heightened in response to specific community-centric events (e.g., Loomis, Dockett, & Brodsky, 2004). As groups evolve, participants become educated consumers of their cumulative experiences and then better able to evaluate their experiences with the program and other participants. This explanation for the intervention group's decline in SOC with Legacy is also supported by the nature and type of the dimensions of SOC with Legacy evaluated in this study, i.e. emotional connection, reciprocal group influences, and commonality with the group, such that these aspects of the group develop over time and SOC with Legacy may change as participants' perspectives and reflection on the group experience mature.

It is noteworthy that the decline in mean SOC with Legacy among the intervention group was documented without regard for actual attendance of Legacy sessions. However, the structural model supported the conclusion that attendance and engagement in Legacy groups predicted positive changes in SOC with Legacy over time. Taking both of these

findings together, the mean decline among intervention participants does not tell the whole story. Mothers who attended Legacy groups more often and who were rated by group leaders as engaged at higher levels were endorsing more positive ratings of SOC over time than lower attending and engaging mothers. Consequently, it is likely that the mean decline in SOC with Legacy is partially due to low attending and low engaging mothers indicating lower levels of SOC with Legacy.

Between groups mean differences favoring intervention exposure were found only on the Commonality with Group subscale of the SCI. This dimension of SOC emphasizes feelings of commonality with Legacy groups and staff, and may have less relevance to control participants by virtue of their control status. Perhaps exposure to intervention groups heightens the importance of this dimension of SOC with Legacy; if so, it may remain the more relevant of the SOC dimensions the longer participants remain in groups. To further examine this suggestion, additional time points will be needed to investigate the relative importance of this dimension of SOC within the intervention group and as compared to control mothers.

SOC with Legacy measured among control participants is another unique contribution of this study. Change in SOC among the control group was characterized by stability or slight increases in SOC. It is possible that these changes are merely regression toward the mean. However, at both time points control participants indicated similar mean levels of SOC with Legacy as intervention participants. Although this may seem counter-intuitive, it could reflect the perceived affiliation, connection, and belonging control mothers feel by just being a part of the research study. Three explanations of this finding are offered: 1) periodic participation in assessments is a light form of community building with the Legacy program;

2) within the first year of Legacy, affiliation with the program produces SOC relatively commensurate in strength to that of the intervention group; and 3) members of the control group may perceive the referent of the SOC items differently than do the program participants. . It is also possible that all these explanations are at work among the control group.

By virtue of consenting to participate in Legacy (even though they were randomly assigned to the control group), perhaps mothers were indicating their desire to belong to a group that promotes effective parenting or felt their current residential or social contexts were lacking in opportunities to build relationships with other parents. The desire to belong to a group like Legacy coupled with positive interactions with Legacy staff at assessment appointments may have been sufficient connection for control mothers to indicate levels of SOC with Legacy similar to the intervention group.

A limitation of this study was the use of blinded assessors; however this was a critical need in order to objectively evaluate the outcomes of the parenting intervention. Because assessors could not know the intervention status of participants, intervention and control groups received the same SOC measure. The control group completed the SCI-Legacy by rating SCI items for whatever they conceived of as the "Legacy community" and this may have introduced an unknown referent to this measurement. It is possible that the control group was rating their SOC with the Legacy community as defined as the recruiter and assessment office staff, as if they were in the group-based parenting program even though they were selected to be controls, or in other unknown ways. This difference in the reference group may also explain the similar levels of SOC seen between the experimental groups if they were rating two entirely different "communities". It is also possible that more time is

necessary to see the full trajectory of SOC with Legacy among the control group and as compared to the intervention group. The meaning of the "Legacy community" to the control participants needs further exploration through semi-structured surveys or focus groups with control participants to discover the meaning of Legacy to these women.

Predictors of Sense of Community with Legacy

Consistent with previous literature, this study found that social support satisfaction was positively related to SOC (Bishop, Chertok, & Jason, 1997; Cowman, Ferrari, & Liao-Troth, 2004; Green & Rodgers, 2001; Laudet, Cleland, Magura, Vogel, & Knight, 2004; Martinez, Black, & Starr, 2002). The program philosophy of Legacy is one that promotes group-efficacy around effective parenting practices and the ultimate ability of all parents to promote the development of their child. The program is not designed or intended to be a case-management program, and therefore the receipt of tangible resources is less likely, while forms of social support within the Legacy groups may proliferate.

For intervention participants, mothers who attend groups may perceive opportunities to cultivate personal relationships that result in social support outside of the Legacy groups. Examples of such support exchanges have surfaced in anecdotal and ethnographic reports: Exchanging phone numbers, sharing in child care duties/needs, providing job-related informational supports. These examples suggest that over time tangible social supports received from other group members may be a benefit to attending Legacy groups. From this perspective, mothers who were satisfied with their social support prior to consenting to and/or participating in Legacy groups may have been able to see opportunities to receive support from others because they had experienced satisfaction and benefit from social supports in other contexts. Such cognitions may contribute to those higher in social support

satisfaction being eager to establish SOC with the program regardless of experimental group assignment. Without further investigating the nature, type, and meaning of social support satisfaction reported at baseline, this explanation is plausible but speculative. However, the reasoning is consistent with the findings of other studies that perceptions of receiving and later feeling social support was a critical reason for electively entering and staying in addiction recovery houses and self-help groups (Laudet, Cleland, Magura, Vogel, & Knight, 2004; Magura, Laudet, Mahmood, Rosenblum, Vogel, & Knight, 2003).

Somewhat surprisingly, mothers low in perceived maternal self-efficacy at baseline had higher levels of SOC with Legacy early in the program (first 6 months) while those with high baseline maternal self-efficacy exhibited lower levels of SOC with the program at 6 months. Although the direction of this effect was not hypothesized, an explanation for it might be found in theoretical models predicting health-related decision making (Ajzen & Fishbein, 1980; Ajzen, 1991) and theorized processes leading to behavior as posited in the Health Beliefs Model (Rosenstock, 1990; Spoth & Redman, 1995). Extrapolating from these models, individuals analyze the potential benefits and weigh the costs of participation in their decisions to enroll in and attend intervention programs. Perhaps mothers with lower perceived maternal self-efficacy, regardless of their intervention group status, were more motivated to cultivate and maintain SOC with Legacy because they perceived the potential for benefiting their parenting efficacy.

Consistent with this explanation, an interaction effect for perceived maternal self-efficacy by intervention group suggests that a negative association of high maternal self-efficacy with SOC held only for those in the control group. Thus, it would appear that Legacy offered the conditions for intervention participants to develop a sense of community

with the program regardless of their initial levels of maternal self-efficacy. However, mothers with higher maternal self-efficacy beliefs at entry may still exhibit lesser levels of SOC than mothers who enter with low maternal self-efficacy beliefs. It is possible that levels of maternal self-efficacy beliefs at entry reflect an aspect of member-group fit where dissimilarity with other group members may explain decisions to return to a group, as has been reported in a study of attendance predictors in self-help groups (Luke, Roberts, Rappaport, 1993). If maternal self-efficacy beliefs represent a potent area of dissimilarity, it may negatively affect member-group fit for mothers who do not feel similarity with other group members and perhaps predict lesser levels of attendance and engagement; thereby reducing levels of SOC among program participants with higher level of maternal self-efficacy beliefs. This possibility should be considered in future research.

Contrary to expectations, several of the psychological characteristics of participants hypothesized to relate to levels of sense of community with the Legacy program failed to reach significance: general self-efficacy, parental competence, and stressful life events. To understand why these factors did not predict SOC with Legacy, consideration must be given to the recruitment strategies and the characteristics of those willing to participate in Legacy. In addition to the study eligibility criteria, those who consented were mothers personally motivated to consent to a five-year research study. The specific motivation for consenting to the Legacy study cannot be known; however, the decision to consent may reflect a positive level of individual competence and/or interest in help-seeking related to parenting. As such, mothers who consented to participate may have perceived that they had adequate levels of general self-efficacy, levels of perceived parental competence, and perceived their levels of stressful life events manageable enough to enroll in Legacy. It is possible that women with

lower self-efficacy beliefs and debilitating levels of stressful life events chose not to consent to the study. Thus, the sample may be a higher functioning group of low-income mothers than would be seen if the sample had been randomly selected from the broader population.

Predictors of Initial Attendance and Engagement

Surprisingly, none of the hypothesized relations between psychological variables at baseline and initial attendance in groups were supported by the data. Only number of stressful life events at baseline surfaced as a predictor of initial engagement, but not of initial attendance. The contributions of baseline income and stressful life events on initial levels of attendance and engagement were modest, accounting for small proportions of the explained variance in either dependent variable. One explanation for the relevance of income level on initial levels of attendance and engagement in Legacy is that work and schedule conflicts may make it more difficult for some mothers to participate in group sessions than for lower income mothers who do not have employment and scheduling demands of the same magnitude. Work commitments or expectations of obtaining employment also likely affected women's initial consent to participate. If this occurred, higher rates of attendance and engagement for lower income mothers may reflect their ability to more easily attend group than a working mother. Anecdotal reports from Legacy group leaders lend support to this explanation as, for some mothers, work schedule conflicts have been a common and growing source of non-attendance in Legacy groups over the life of the study.

Additionally, literature of formal and informal help-seeking related to parenting supports suggests that lower income families are more likely than higher income parents to utilize formal parent supports such as program-based offerings and professional services (Redmond, Spoth, & Trudeau, 2002). This may be due to their low-income status and/or the

exclusive use of professional parent supports typically provided by social service programs. Additionally, higher income families tend to rely more on informal supports for parenting than lower income families (Spoth & Conroy, 1993). Recent research found that individuals of lower SES and educational attainment report lower social supports than higher SES individuals (Mickelson & Kubzansky, 2003). Hence, Legacy mothers with relatively higher incomes may have more opportunities and means to get parenting support from outside others than lower income Legacy participants. If more social resources are available to higher income mothers in Legacy, perhaps this explains the higher levels of attendance and engagement seen among lower income Legacy mothers.

Lastly, efforts to reduce barriers to participation in Legacy were made by providing sibling child-care, transportation to and from group, and snacks in group meetings. The provision of these services in the delivery of the program may have increased lower income mothers' ability to overcome barriers to participation. Previous findings that barriers to participation in preventive interventions are most salient to lower income and under-represented families (Spoth, Goldberg, & Redmond, 1999; Warren-Findlow, Prohaska, & Freedman, 2003) and recommendations of that sensitive and flexible retention strategies be utilized (Armistead, Clark, Barber, Dorsey, Hughley et al., 2004) may suggest the efforts made in Legacy to reduce barriers and increase retention were working, particularly for the mothers with lower levels of income.

The finding that higher levels of stressful life events contributed to higher initial engagement ratings (as rated by group leaders) was contrary to hypotheses. One reason the hypothesized relation was not supported may be that those who enrolled had manageable levels of stressful life events and felt able to consent to the study; thereby reducing the

variance in stressful life events seen in the study sample. It is possible that the group setting offered such mothers who were experiencing high levels of stress an opportunity to get advice, consolation, and comfort from others. Also, these mothers may have used the group context to aid in problem- and emotion-focused coping. By initiating conversation about events in their lives or seeking advice from facilitators and other group members, these mothers' behaviors may have been reflective of actual higher levels of engagement with the program and/or perceived by the group leader as a higher level of engagement.

Implications for Intervention Programming

This study found that in a group-based, parenting intervention program a sense of community among participants was fostered at least in part through engagement and perhaps even at the point of enrollment/consent to participate. SOC was established within the first 6 months and changes in SOC with the program by 1 year were small in magnitude and not further predicted by baseline psychological factors. Support for the indirect effect of initial engagement on later SOC with the program indicates that early engagement may contribute SOC in the long-term. One important conclusion from this investigation is that meaningful changes in SOC over time may actually take more time to fully evaluate. Steps to increase engagement early in the intervention may be the best way to facilitate sense of community among participants over time. The only consistent contributor to initial engagement in the parenting program was lower income level. Increasing opportunity for engagement within other parent-focused programs should address the reduction of known barriers to participation among low-income families such as transportation, childcare for target children and/or sibling care, and the day or time when meetings are held as these efforts may increase the ability of lower-income mothers to participate in prevention programs.

Participants' perceptions of the acceptability of an intervention may be just as important as the intervention itself, particularly if participants do not like the intervention or do not see value in participation. If the barriers to participation are too high and/or the perceived benefits too low, individuals may not participate (Spoth & Redmond, 1995). The nature of preventive interventions, like Legacy, present even more of a challenge to enrolling and engaging parents as they are most likely unaware that their child is at risk for developmental difficulties and/or less aware that their parenting practices may affect development in positive and negative ways. In circumstances where families are recruited not because a condition is present in their child but rather because they live in known conditions of risk, motivation to enroll and participate in a preventive intervention may be a significant challenge. Results of this study offer the Legacy for Children™ intervention program as an example of one way to combat lack of motivation through purposeful efforts to build SOC among participants as a means of increasing motivation to return to program sessions and creating an emotional connection with the program and peer participants.

Group-based intervention programs might benefit from making special efforts to get participants comfortable and interested in being a part of the program, both to encourage attendance and engagement and to promote SOC with the program. Given the positive relation demonstrated in this study between engagement and SOC with the program, perhaps activities that promote SOC among participants should be a primary emphasis at the start of long-term, group-based intervention programs. Additionally, group and community building activities may need to be purposefully amplified in the early stages of the program. Research of predictors of attendance and retention in self-help programs suggests the first meeting(s) is a critical time in which new members evaluate if a group meets their needs, to what extent

they feel comfortable in and with the group, and whether or not they feel welcomed by other group members (Luke, Roberts, & Rappaport, 1993); at that time, they may also cognitively assess whether or not to return to future meetings. These processes related to attendance in self-help groups also may have relevance to programs like Legacy. Activities early in group meetings that promote trust building and confidence among group members and program staff, that highlight commonality among group participants, and that provide situations or activities that promote emotional connections among the members (e.g. discussion-oriented group formats and group social activities), may all aid in creating SOC with a program as they have in Legacy.

Legacy purposefully incorporated non-didactic approaches, discussion-oriented group formats, and community building activities to foster SOC with the program (one of several intervention goals). The program used social activities among participants, such as a group outing to the zoo or group birthday parties for the study children, to help normalize relations among participants and support attendance and engagement with the program. In these and many other ways, the intervention program format may 1) support engagement and foster SOC with the program; 2) attempt to normalize the value and interest in the intervention goals (for Legacy, parenting to promote development); and, ultimately, 3) engage participants who individually and as a group are more willing to digest the intervention messages and try out new behaviors among trusted peers. Each of these possibilities should be examined in further research.

Study Strengths, Limitations, and Future Directions

This study employed a randomized, longitudinal experimental design. The intervention was set in a community context, sensitive to barriers to participation, and was

flexible to the needs and interests of the participants; all of which increased its ecological validity. The measurement of SOC with the Legacy program and with participants' neighborhoods among both the intervention mothers and control mothers added strength and uniqueness to the findings. However, the findings may generalize only to relatively poor, African American, English speaking mothers with newborn children. Some threats to external validity such as the potential for self-selection biases could not be avoided. Additionally, given the racial/ethnic homogeneity in the current sample, it is difficult to examine the potential effects of historical oppression, cultural beliefs around self- versus group-reliance, and socio-political disenfranchisement on the SOC findings in this intervention. Clearly such factors may vary across salient contexts and affect participants' willingness and interest in developing SOC in a new setting such as the Legacy program. Although this study could not address these influences, future research should consider the implications of race, culture, and historical oppression in research of SOC among diverse populations. In Legacy, the common experience of being a parent may have superceded some of these factors in the development of SOC or the similarity of the group members (e.g. most all were African American, lived in similar neighborhoods, and all were impoverished) affected SOC in ways not captured by the present study. However, the findings provide a basis for future research on group-based, prevention programs targeting low-income parents in urban environments; and offer fodder for further inquiry into the role of race, ethnicity, and culture in the development of SOC in an intervention setting.

Additionally, as previous researchers have noted, the measurement of SOC and participant engagement is an evolving art and a difficult limitation to understanding the phenomena fully. The present study was limited in its measurement of group engagement

due to reliance on the group leader's impression of participant engagement rather than participant-reported engagement with the groups. Clearly, having multi-informant data on levels of engagement with the program would improve confidence in such measures. Additionally, the measurement of SOC with Legacy was based entirely on an adapted version of the most widely utilized measure of sense of community. However, this measure may not have captured a full accounting of what sense of community with the Legacy program meant to the participants, and may have introduced unknown biases in its accounting of control participants' SOC with the intervention program. In a focus group, Legacy intervention mothers were asked what they have learned from being part of Legacy and one mother said, "Women with lots of money have lots of things they can do. But the rest of us need a group to go to. I can see others in the same position [as me] struggling. I'm glad to learn to have a healthy relationship [with my child]. It doesn't matter if you have a lovely home…It's not important." Another mother said, "My Legacy group is my family. I can talk to them and they listen. I want them to be at my children's birthday parties." These two examples provide insight into the reasons participants engage in and experience connections in Legacy, insights that could not be gleaned using only an adapted SCI and attendance and engagement ratings.

The findings suggest that SOC can be created by the formation of a new group and context where there is a common goal, such as raising and assuring the positive development of a child, and this can be done with lower income mothers. It is critical that intervention developers and parent training researchers do not ignore the value of participant contributions and effects such as the development of SOC. Specifically, didactic parent-education methods may undervalue the lived experiences of lower-income mothers and lack racial, cultural, and

contextual sensitivity around parenting beliefs and practices. This study demonstrated that if mothers actually attend parent groups that are discussion-oriented and provide opportunity for their thoughts and reflections to be valued, SOC with the program will develop. This finding requires further study but should not be ignored by those developing parent-focused interventions. Future investigations of the effect of intervention program format and delivery on the development of SOC with a program (e.g. a Legacy-like group-based intervention versus a didactic parenting program versus a control group design) may test these assertions empirically.

However, the richness and relevance of SOC in an intervention context is not easily understood as it combines motivations, perceptions, and qualities of various settings at the individual as well as the group level. One strategy to further explore this complex relation is by diversifying measurement approaches within the same study. Efforts to triangulate using quantitative and qualitative data are clearly needed to take this and future investigations to a new level. By doing so, research may further elucidate factors related to participants' decisions to enroll in interventions like Legacy and to stay in them over time; identify the causes non-attendance and lack of engagement in the program; and understand how program format and activities early in the intervention may relate to engagement and SOC in the long-term. Additionally, after fully understanding the development of SOC with a group-based prevention program among individuals, it would be valuable to examine SOC at the group level to see if there are different predictors or trajectories for SOC at an aggregated level of measurement. This study did not examine group-level SOC but future research should carefully consider levels of operation of SOC in group-based settings.

The longitudinal nature of this study offers both strengths and limitations. The finding that SOC changed only slightly over one year and in an unexpected direction suggests that fully understanding these relations over time, will take more time. For this study and future research in this area, it may be very important to consider how the passage of time and continued exposure to groups will develop in terms of SOC with the program. This study provides a foundation for further inquiry but it needs replication in other intervention settings, in a variety of intervention formats, among diverse populations, and with adequate time to garner the full meaning of relations among these constructs. The findings also suggest that cross-sectional snapshots of SOC in relationally-based contexts may be inappropriate, as the relative importance of certain dimensions of SOC may evolve over time and differently for different groups. Given that cross-sectional methodology has been almost exclusively relied upon in the study of SOC across contexts, perhaps the academic debate around the variability in measurement validity and nature of the dimensions of SOC (e.g., Bess, Fisher, Sonn, & Bishop, 2002; Obst & White, 2004) is fueled by the nature of cross-sectional investigations. SOC researchers need to move beyond cross-sectional studies; longitudinal research is needed in order to capture the dynamic nature of the referent community (relational or geographic) and provide developmental perspective in feelings associated with a referent community or group.

The field continues to expand conceptualizations and measurement approaches but still largely relies on cross-sectional snapshots of SOC which do not explore the birth, life, and death of SOC with a given community and among the same participants. Additionally, the field has not used experimentation to explore the development of SOC in intervention research settings; the applied utility of SOC is a critically under-developed area of SOC

research that needs further consideration. This study is a first step in using a developmental perspective to inform the SOC literature in an applied setting and provides thought-provoking results around SOC among intervention and control participants. Future research into SOC in the Legacy program will link SOC to intervention inter-mediate and long-term goals; other SOC and intervention researchers should pursue similar inquiries in other intervention settings.

Group-based, longitudinal interventions should consider deliberate inclusion of non-didactic program formats and activities that can enhance SOC with the program. Increased SOC with the program may affect acceptance of the intervention and, perhaps, dosage of the intervention in positive ways. Of course, this hypothesized effect of SOC needs confirmation within Legacy and exploration in other intervention programs. Efforts to bolster SOC in a program may also indirectly result in participants feeling capable and empowered to seek out new community groups and resources after having had success doing so in the intervention setting. Previous literature shows that one of the strongest predictors of community involvement and group action is previous involvement in community groups or socio-political action (Chavis & Wandersman, 1990; Catano, Pretty, Southwell, & Cole, 1993), and a strong predictor of parenting skills program enrollment is past utilization of parenting resources (Spoth & Redmond, 1995). Hence, perhaps building SOC in the intervention setting may result in participants generalizing their experience into continued involvement with other participants or new involvement with other community groups.

Lastly, it is important to acknowledge and plan for the termination of programs, and recognize that endings can leave participants feeling empty, neglected, and forgotten, which is an important point too often overlooked. Community-based programs have a unique

opportunity to create something that transcends the group-based programming and that is sense of community. Mothers who participate in Legacy often identify themselves as a "Legacy Mom" and it remains to be seen how long they will continue to self-identify as such. However, this identification and a perceived commonality with other participants through membership in Legacy may bring mothers together even after the study groups are over. In the pilot study of the Legacy program at the Los Angeles site, the pilot mothers who once participated in groups still maintain relationships now that the groups are over. In fact, in follow-up phone interviews some pilot mothers indicated their group was planning a "Legacy Reunion" which demonstrates that the meaning of the program and the connections to others in the program have not been lost. Quite to the contrary, for some, Legacy lives on in this community of mothers who once participated in a study.

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APPENDIX A. SENSE OF COMMUNITY INDEX (SCI-ADAPTED)

NEIGHBORHOOD REFERENT

Now I'd like to know how you feel about your home neighborhood. For each item I read, please tell me how much you agree or disagree with the statement.

The first statement is:
Response set for items 1-12:

1 = STRONGLY DISAGREE
2 = DISAGREE
3 = NEITHER AGREE NOR DISAGREE
4 = AGREE
5 = STRONGLY AGREE

1. I think my neighborhood is a good place for me to live. Would you say…
2. People in my neighborhood share the same values.
3. My neighbors and I want the same things from this neighborhood.
4. I can recognize most of the people who live in my neighborhood.
5. I feel at home in this neighborhood.
6. Very few of my neighbors know me.
7. I care about what my neighbors think of my actions.
8. I have influence over what this neighborhood is like.
9. If there is a problem in my neighborhood people who live here can get it solved.
10. It is very important to me to live in this particular neighborhood.
11. People in this neighborhood get along with each other.
12. I would like to live in this neighborhood for a long time.

LEGACY FOR CHILDREN REFERENT

Now I'd like you to tell me how you feel about **Legacy for Children**. By Legacy, we mean everyone you come in contact with in Legacy for Children.

How much do you agree with the statement:
Response set for items 1-12:

1 = STRONGLY DISAGREE
2 = DISAGREE
3 = NEITHER AGREE NOR DISAGREE
4 = AGREE
5 = STRONGLY AGREE

1. I think it's good for me to be a part of Legacy.
2. People in Legacy share the same values.
3. Other mothers in Legacy want the same things from Legacy that I want.

4. I can recognize most of the people in Legacy.
5. I feel at home in Legacy.
6. Very few in Legacy know me well.
7. I care about what others in Legacy think of my actions.
8. I have influence over what goes on in Legacy.
9. If there is a problem, Legacy can get it solved.
10. It is very important to me to be part of Legacy.
11. People in Legacy generally get along with each other.
12. I would like to be part of Legacy for a long time.

APPRENDIX B: DUKE FUNCTIONAL SOCIAL SUPPORT QUESTIONNAIRE

This is a list of some things that other people do for us or give us that may be helpful or supportive. As I read each statement, please tell me which answer is closest to your situation.

Response set:

1) Much less than I would like
2)
3)
4)
5) As much as I would like

1. I get love and affection.
2. I get chances to talk to someone I trust about my personal problems and family problems.
3. I get invitations to go out and do things with other people.
4. I have people who care what happens to me.
5. I have chances to talk about money matters.
6. I get useful advice about important things in life.
7. I get help when I need transportation.
8. I get help when I'm sick in bed.
9. I get help with cooking and housework.
10. I get help taking care of my child(ren).

APPENDIX C: SELF-EFFICACY SCALE

For each statement the respondent indicates how much they agree or disagree on the following scale: 1=strongly disagree and 14=strongly agree.

The response set looks like:

1) Strongly disagree
2)
3)
4)
5)
6)
7)
8)
9)
10)
11)
12)
13)
14) Strongly agree

Items:

1. When I make plans, I am certain I can make them work.
2. One of my problems is that I cannot get down to work when I should.
3. If I can't do a job the first time, I keep trying until I can.
4. It is difficult for me to make new friends.
5. When I set important goals for myself, I rarely achieve them.
6. I give up on things before completing them.
7. If I see someone I would like to meet, I go to that person instead of waiting for him or her to come to me.
8. I avoid facing difficulties.
9. If something looks too complicated, I will not even bother to try it.
10. If I meet someone interesting who is hard to make friends with, I'll soon stop trying to make friends with that person.
11. When I have something unpleasant to do, I stick to it until I finish it.
12. When I decide to do something, I go right to work on it.
13. When trying to learn something new, I soon give up if I am not initially successful.
14. When I'm trying to become friends with someone who seems uninterested at first, I don't give up easily.
15. When unexpected problems occur, I don't handle them well.
16. I avoid trying to learn new things when they look too difficult for me.
17. Failure just makes me try harder.
18. I do not handle myself well in social gatherings.
19. I feel insecure about my ability to do things.

20. I am a self-reliant person.
21. I have acquired my friends through my personal abilities at making friends.
22. I give up easily.
23. I do not seem capable of dealing with most problems that come up in life.

APPENDIX D: PARENT COMPETENCE SUBSCALE, PARENT STRESS INDEX (PSI)

Which response best represents your feelings on the following items:
Response set for items 1-11:

1) Strongly agree
2) Agree
3) Not sure
4) Disagree
5) Strongly disagree

1. When [infant's name] came home from the hospital, I had doubtful feelings about my ability to handle being a parent. Would you say…
2. Being a parent is harder than I thought it would be.
3. I feel capable and on top of things when I am caring for [infant's name].
4. I can't make decisions without help.
5. I have had many more problems raising children than I expected.
6. I enjoy being a parent.
7. I feel that I am successful most of the time when I try to get [infant's name] to do or not do something.
8. Since I brought my last child home from the hospital, I find that I am not able to take care of [infant's name] as well as I thought I could. I need help.
9. I often have the felling that I cannot handle things very well.
10. When I think about myself as a parent I believe…
    a. I can handle anything that happens,
    b. I can handle most things pretty well,
    c. Sometimes I have doubts, but find that I handle most things without any problems,
    d. I have some doubts about being able to handle things, or
    e. I don't think I handle things very well at all?
11. I feel that I am…
    a. A very good parent,
    b. A better than average parent,
    c. An average parent,
    d. A person who has some trouble being a parent, or
    e. Not very good at being a parent?

APPENDIX E: PERCEIVED MATERNAL SELF-EFFICACY (STUDY DEVELOPED)

Response set:

1) very true
2) sort of true
3) not very true
4) not at all true

Items:

1. I know what a mother needs to do to have a well-behaved baby.
2. I know what a mother needs to do to help her baby learn to explore and talk.
3. I know what a mother needs to do to have a happy and secure baby.
4. I can help my baby be well-behaved if I try.
5. I can help my baby learn to explore and talk if I try.
6. I can help my baby feel happy and secure if I try
7. A mother has a lot to do with how well-behaved her baby is.
8. A mother has a lot to do with how well her baby learns to explore and talk.
9. A mother has a lot to do with how happy and secure her baby feels.
10. It is important to me to have a well-behaved baby.
11. It is important to me to have a baby who learns to explore and talk.
12. It is important to me to have a happy and secure baby.

APPENDIX F: PARENTING STRESS INDEX, STRESSFUL LIFE EVENTS

During the last 12 months, have any of the following events occurred in your immediate family? Please include yourself. Definitions of "immediate family member", "marital reconciliation", "promotion at work", and "superiors" are provided to respondent if necessary.

1. Divorce	Y/N
2. Marital reconciliation	Y/N
3. Marriage	Y/N
4. Separation	Y/N
5. Pregnancy	Y/N
6. Other relative moved into the household	Y/N
7. Income increased 20% or more	Y/N
8. Went deeply into debt	Y/N
9. Moved to a new location	Y/N
10. Promotion at work	Y/N
11. Income decreased by 20% or more	Y/N
12. Alcohol or drug problem	Y/N
13. Death of close family friend	Y/N
14. Began new job	Y/N
15. Entered new school	Y/N
16. Trouble with superiors at work	Y/N
17. Trouble with teachers at school	Y/N
18. Legal problems	Y/N
19. Death of immediate family member	Y/N

APPENDIX G. PARTICIPANT 10-WEEK ENGAGEMENT RATING

1. How interested is this parent in most or all of the topics (for the meetings she attended) in the past 10 weeks?

Not Interested Somewhat Interested Very Interested
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

2. How actively does this parent participate in the group discussions? An active participant is one who usually contributes to discussions, either by responding to questions or adding her point of view.

Passive Listener Moderately Active Active Participant
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

3. To what degree does this parent adhere to established ground rules?

Not at All Somewhat To a Great Degree
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

4. How much do you think this parent enjoys the group?

Not At All Somewhat A Great Deal
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

5. To what degree do you think this parent feels a sense of support from and acceptance by the group?

Not at All Somewhat To a Great Degree
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

6. At what level is this parent accessing parenting resources in her community?

__Don't know

Not at All Somewhat A Great Deal
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

7. Based on your observations, to what degree does this mother seem to view *Legacy* as part of her social network?

Not At All Somewhat To a Great Degree
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

8. To what degree do you think this parent accepts differences in opinion among group members?

Not at All Somewhat To a Great Degree
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

9. How much does this parent actively offer support to other group members (e.g., expresses empathy, treats others with respect, is a good listener)?

Not at All Somewhat A Great Deal
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

10. How often does this parent add to the discussion by offering the group new ideas and perspectives?

Hardly Ever Sometimes Quite Often
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

11. What kind of attitude does this parent usually display toward participating in this group?

A Very Negative Attitude A Very Neutral Attitude Positive Attitude
1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 7

How much do you think this parent enjoys the group? How often does this parent add to the discussion by offering the group new ideas and perspectives?