

2018

Sustaining Evidence-Based Substance Use Prevention Interventions: A Five-And-A-Half Year Follow-Up Study

Tara Kenworthy
University of South Carolina

Follow this and additional works at: <https://scholarcommons.sc.edu/etd>



Part of the [Clinical Psychology Commons](#), and the [Community Psychology Commons](#)

Recommended Citation

Kenworthy, T.(2018). *Sustaining Evidence-Based Substance Use Prevention Interventions: A Five-And-A-Half Year Follow-Up Study*. (Master's thesis). Retrieved from <https://scholarcommons.sc.edu/etd/4917>

This Open Access Thesis is brought to you by Scholar Commons. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact digres@mailbox.sc.edu.

SUSTAINING EVIDENCE-BASED SUBSTANCE USE PREVENTION
INTERVENTIONS: A FIVE-AND-A-HALF YEAR FOLLOW-UP STUDY

by

Tara Kenworthy

Bachelor of Arts
Boston University, 2012

Submitted in Partial Fulfillment of the Requirements

For the Degree of Master of Arts in

Clinical-Community Psychology

College of Arts and Sciences

University of South Carolina

2018

Accepted by:

Abraham Wandersman, Director of Thesis

Bret Kloos, Reader

Cheryl L. Addy, Vice Provost and Dean of the Graduate School

© Copyright by Tara Kenworthy, 2018
All Rights Reserved.

ACKNOWLEDGEMENTS

This study was funded in part by the Pacific Institute for Research and Evaluation–Louisville Center and the University of South Carolina, Department of Psychology.

ABSTRACT

In the United States, extensive monetary resources are dedicated annually to support drug use prevention programs, but the sustainability of these interventions over time is often a neglected area of research. This study examines the moderating effect of capacity factors on the relationship between motivation factors and years interventions were sustained. We retained a sample of 29 evidence-based substance use prevention interventions implemented in 14 community coalitions as part of the Strategic Prevention Framework State Incentive Grant (SPF SIG) in Tennessee. Primary data were collected through interviews about each intervention conducted five-and-a-half years after SPF SIG funding ended. These interviews included scale data about motivation factors related to sustainability and a qualitative question asking participants why they thought the intervention was sustained or not. Secondary data previously collected about organizational capacities were also examined. We found that capacity factors of change in coalition formalization, change in data resources, and change in funding moderated the relationship between the motivation factor of trialability and years interventions were sustained. Change in coalition formalization and change in data resources also moderated the relationship between the other motivation factor of interest, relative advantage, and years interventions were sustained. These findings suggest that motivational factors may be particularly important in low-resourced coalitions. The qualitative data suggest that participants perceived relationships among stakeholders, compatibility, observability, and funding to have been critical factors for the sustainability of the interventions

implemented by their coalitions. The results of this study will be important for theory-building and suggestions for future research regarding the complex factors that lead to sustainability of interventions.

TABLE OF CONTENTS

Acknowledgements	iii
Abstract.....	iv
List of Tables	vii
List of Figures	viii
Chapter 1: Introduction.....	1
Chapter 2: Method.....	10
Chapter 3: Results	21
Chapter 4: Discussion.....	47
References.....	55
Appendix A: Items from Motivation for Sustainability Interview	61

LIST OF TABLES

Table 2.1 Motivational Attributes and Definitions	19
Table 3.1 Hierarchical Multiple Regression for Trialability and Coalition Formalization with Years Intervention Sustained as the Outcome	32
Table 3.2 Hierarchical Multiple Regression for Trialability and Change in Coalition Structure with Years Intervention Sustained as the Outcome	33
Table 3.3 Hierarchical Multiple Regression for Trialability and Change in Data Resources with Years Intervention Sustained as the Outcome.....	34
Table 3.4 Hierarchical Multiple Regression for Trialability and Change in Funding Resources with Years Intervention Sustained as the Outcome.....	35
Table 3.5 Hierarchical Multiple Regression for Relative Advantage and Coalition Formalization with Years Intervention Sustained as the Outcome.....	36
Table 3.6 Hierarchical Multiple Regression for Relative Advantage and Change in Coalition Structure with Years Intervention Sustained as the Outcome.....	37
Table 3.7 Hierarchical Multiple Regression for Relative Advantage and Change in Data Resources with Years Intervention Sustained as the Outcome.....	38
Table 3.8 Hierarchical Multiple Regression for Relative Advantage and Change in Funding Resources with Years Intervention Sustained as the Outcome.....	39
Table 3.9 Multiple Regression for All Predictors with Years Intervention Sustained as the Outcome.....	40
Table 3.10 Coded Qualitative Responses in Response to Question About What Participants Believed Drove Sustainability (or Lack of Sustainability).....	41
Table A.1 Items from Motivation for Sustainability Interview	61

LIST OF FIGURES

Figure 1.1 Path Model	9
Figure 2.1 Flow Diagram – Selection of Participants	20
Figure 3.1 Coalition Formalization Moderates the Relationship Between Trialability and Years Interventions Were Sustained	42
Figure 3.2 Change in Data Resources Moderates the Relationship Between Trialability and Years Interventions Were Sustained.....	43
Figure 3.3 Change in Funding Resources Moderates the Relationship Between Trialability and Years Interventions Were Sustained	44
Figure 3.4 Coalition Formalization Moderates the Relationship Between Relative Advantage and Years Interventions Were Sustained	45
Figure 3.5 Change in Data Resources Moderates the Relationship Between Relative Advantage and Years Interventions Were Sustained	46

CHAPTER 1

INTRODUCTION

The United States dedicates over one billion dollars per year to substance use prevention programs. For example, in the fiscal year 2017, \$1.5 billion is requested to support drug use prevention programs, \$48.5 million more than requested in 2016. This includes funding for several governmental agencies, the Department of Health and Human Services, Department of Education, Department of Transportation, and Office of National Drug Control Policy (Office of National Drug Control Policy, 2016). The Substance Abuse and Mental Health Services Administration (SAMHSA) has requested \$119.5 million for their Strategic Prevention Framework (SPF) alone in the fiscal year 2017 (Department of Health and Human Services, 2016). Extensive resources are also allocated to identifying evidence-based prevention programs and strategies and listing them in registries and databases. For example, SAMHSA maintains the National Registry of Evidence-based Programs and Practices (NREPP; (Substance Abuse and Mental Health Services Administration, 2016)) for behavioral health interventions. Other fields and agencies have similar databases of evidence based programs, such as the Department of Education's What Works Clearinghouse (U.S. Department of Education), the National Cancer Institute's Research-tested Intervention Programs (National Cancer Institute), and the University of Colorado's Blueprints for Violence Prevention Program (University of Colorado Boulder, 2017). Despite the sizeable resources and effort dedicated to identifying and implementing evidence-based programs, the sustainability of these

interventions is often a neglected area of research (Cooper, Bumbarger, & Moore, 2015; Tibbits, Bumbarger, Kyler, & Perkins, 2010). There is a need for greater attention to the long-term effects of substance use prevention programs, particularly after initial external funding is discontinued. This research is relevant both to funding agencies that expend resources to implement programs and to communities that are left to continue programs without the support of initial funds and resources (Scheirer & Dearing, 2011).

Sustainability has been defined by Johnson, Hays, Center, & Daley (2004) as “the process of ensuring an adaptive prevention system and a sustainable innovation that can be integrated into ongoing operations to benefit diverse stakeholders.” Sustainability has many synonyms in the literature, the most common of which is institutionalization (Johnson et al., 2004). It has also been measured in many ways, for example, as whether or not an intervention is in operation (vaguely defined), if there are continued outcomes for consumers, or if components of the intervention are still in operation (Scheirer & Dearing, 2011; Stirman et al., 2012). Due to the limited resources and brief interview format of this study, we define sustainability by whether or not an intervention continues to operate in any capacity. Benefits to the targeted population is beyond the scope of this study.

The literature defines several components of organizational capacity as necessary for sustaining interventions. For example, in a review of sustainability of public health programs, Scheirer and Dearing (2011) identify three sustainability frameworks emerging in the literature: characteristics of the specific intervention (flexible, inexpensive, and evidence-based), factors in the organizational setting (fit, champion, capacity and leadership, and staff opinion), and factors in the community environment of each

intervention site (partnerships for non-monetary support and available funding).

Similarly, Johnson, Collins, and Wandersman (2013) suggested that two capacities must be addressed in order to sustain interventions: stakeholder capacity (awareness of, commitment to, and support for an innovation) and infrastructure capacity (administrative structures, champions, resources, administrative policies, and expertise in integrating the innovation into the routine operations). However, despite the development of theoretical frameworks predicting factors that lead to sustainability, this has not translated into a coherent research paradigm (Scheirer & Dearing, 2011).

There are several gaps in the literature on intervention sustainability. First, the frameworks describing sustainability focus primarily on organizational capacities. Accordingly, many federally funded intervention programs are required to track measures of organizational capacity during the lifespan of their funding (e.g., using a Coalition Capacity Survey (Collins, Shamblen, Harris, Johnson, & Dwivedi, 2009)). However, theories of organizational readiness for change suggest that motivation is also necessary for the ongoing implementation of innovations (Scaccia et al., 2015; Weiner, 2009). In fact, the frameworks for sustainability also note some motivational factors, such as staff opinion (Scheirer & Dearing, 2011) and stakeholder commitment to and support of an innovation (Johnson et al., 2013). To our knowledge, motivational factors have not before been captured systematically in studies of sustainability. Therefore, we sought to understand if motivational factors predicted sustainability of interventions (previously published with motivational factors referenced as “sustainability attributes;” (Johnson, Collins, Shamblen, Kenworthy, & Wandersman, 2017)).

Additionally, research is limited when considering the interaction between predictors of sustainability (for example, organizational capacities, such as funding or resources, and elements of the intervention itself, such as compatibility or fit; (Stirman et al., 2012). Just one study was identified that considered the interactions between multiple factors purported to predict sustainability. In a qualitative case study of sustainability of injury prevention programs, Nilsen and colleagues found that among financial, human, structural, and relational resources, activities, effects, and context, no one factor was sufficient in itself to predict sustainability, and the factors were all interrelated (Nilsen, Timpka, Nordenfelt, & Lindqvist, 2005). Thus, there is a need for studies to strategically measure factors that may influence sustainability and the interactions between them. To fill this gap, the present study aims to measure the interactions between motivational factors and organizational capacities.

Tennessee Strategic Prevention Framework State Incentive Grant

From June 2005- May 2010, 27 community coalitions in 27 counties (one coalition per county) in Tennessee received approximately twelve million dollars to implement substance use prevention interventions as part of the Strategic Prevention Framework State Incentive Grant (SPF SIG), funded by the U.S. Center for Substance Abuse Prevention (Piper, Stein-Seroussi, Flewelling, Orwin, & Buchanan, 2012). The evaluation, training, and technical assistance for awardees was provided by the Pacific Institute for Research and Evaluation (PIRE). The goal of this grant program was to provide a framework for strengthening state and community level substance use prevention programs in order to reduce substance use problems. Substance abuse prevention coalitions worked with their communities to plan and implement prevention

programs targeting individuals between the ages of 18 and 24. Contrary to the literature suggesting that sustainability should be considered throughout the process of implementation, sustainability was not systematically addressed until the end of the grant funding in the TN SPF SIG (Johnson et al., 2013).

The Present Research

In 2015, approximately five-and-a-half years after the TN SPF SIG funding ended, researchers from PIRE and the University of South Carolina initiated a study to investigate whether the interventions implemented through this grant had been sustained and to identify which factors contributed to sustainability (Johnson et al., 2017). The Motivation for Sustainability Interview was created and piloted to investigate if motivational attributes of interventions (stakeholder relationships, ownership of the intervention, relative advantage, compatibility, complexity, trialability, and priority), which have been previously linked to motivation to for implementation and/or sustainability (Gersten, Vaughn, Deshler, & Schiller, 1997; Johnson et al., 2004; Lam, Wing-yi Cheng, & Choy, 2010; Scaccia et al., 2015; Wong, 1997), predicted their sustainability in our sample. In addition, this interview contained an open-ended question about participant perceptions of why interventions were sustained or not, which allowed examiners to examine if participants' perceptions of sustainability factors were consistent or inconsistent with the proposed theory.

Previously reported findings. Johnson and colleagues (2017) previously reported on some aspects of this study. They examined coalition survival and found that 27 of 29 coalitions survived beyond SPF SIG funding, and 19 (70%) of coalitions were

active five-and-a-half years later. They also examined evidence-based prevention intervention sustainability and found that 29 of 37 (97%) evidence-based interventions were sustained between two and five-and-a-half years, and 22 (76%) of these interventions were sustained for five-and-a-half years. They examined the relationship between coalition capacities (described in more detail in the measures section) and motivational attributes (which they named “sustainability attributes” in their paper, also described in more detail in the measures section) with years interventions were sustained, using zero-order correlations and mixed linear regression models. Among coalition capacities, they found that coalition formalization, change in data resources, and change in funding resources all significantly predicted years interventions were sustained in mixed linear regression models. Among motivational attributes, they found that trialability predicted years interventions were sustained. In addition, the capacity factor of change in coalition structure and motivational factor of relative advantage correlated with years interventions were sustained. Therefore, in the present study, we further examined only those capacities and motivational attributes that were found to be associated with years interventions were sustained by Johnson and colleagues (2017).

Unique contributions of the present study. While motivation is necessary, it is not sufficient for quality implementation to occur; organizational capacities must also be present (Scaccia et al., 2015). During the SPF SIG, a survey was administered that assessed organizational capacities. We used this secondary data from the Coalition Capacity Survey to explore the potential moderating effect of organizational capacities of coalition formalization, change in coalition structure, change in data resources, and change in funding resources, on the relationship between motivational attributes of

trialability and relative advantage and years interventions are sustained (Collins et al., 2009). The use of this secondary data allows us to understand both the contributions of motivation and capacity, as well as address the need for quantitative research examining the interactions between factors contributing to sustainability (Stirman et al., 2012).

This study has potential to add to the field of sustainability research in several ways. First, the research on long term sustainability, especially over five years past grant funding, is limited (Bond et al., 2014; Peterson et al., 2014). Thus, this study may provide valuable information about the features of long-term sustainability. Second, the interaction between motivational factors and capacities will be tested as predictors of sustainability for the first time, to the best of our knowledge. Specifically, because of the focus on our novel Motivation for Sustainability Interview, we are interested in primarily understanding how motivation affects sustainability, and how organizational capacities may moderate that relationship. Further, we will include qualitative analysis based on one question from the Motivation for Sustainability interview that asked participants why they thought their intervention was sustained or not.

The purpose of this pilot study is to understand the attributes that contribute to sustainability of substance use prevention interventions implemented in the 2005-2010 cohort of the TN SPF-SIG. More specifically, we sought to (1) examine the potential moderating relationship of organizational capacities on the relationship between motivational attributes of trialability and relative advantage and years interventions were sustained, (2) use deductive and inductive thematic analysis to examine qualitative evidence for our theory about the influence of motivational attributes on years interventions were sustained, and (3) provide future directions for sustainability research.

We hypothesize that scores on the motivational attributes of trialability and relative advantage will predict the number of years interventions were sustained, and that organizational capacities will moderate this relationship (Figure 1.1).

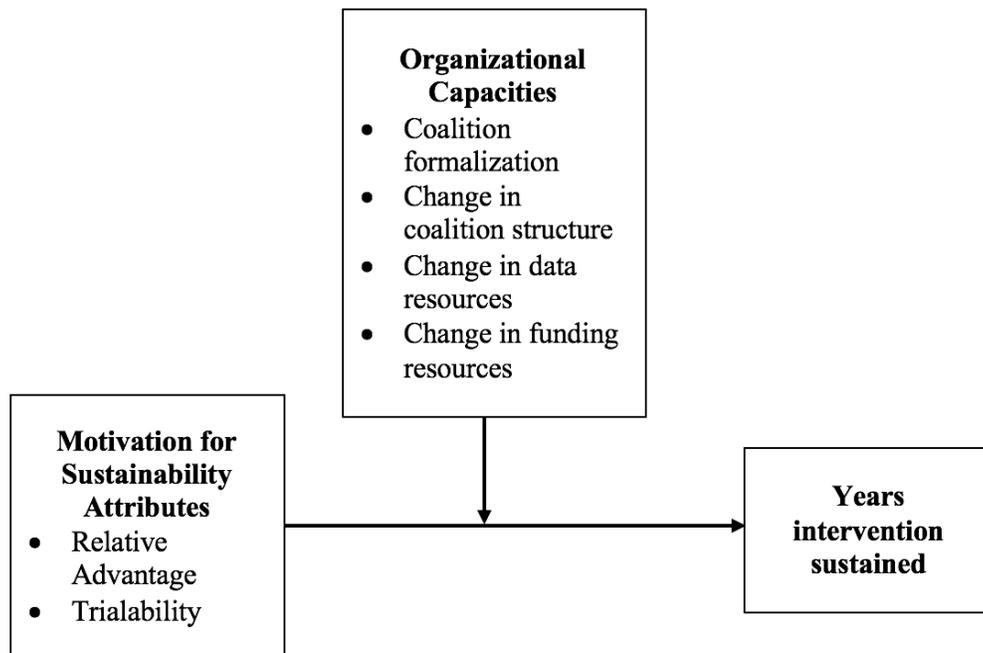


Figure 1.1 Path Model

CHAPTER 2

METHOD

Participants

We retained a sample of 29 evidence-based substance use prevention interventions that were implemented at 14 community coalitions that participated in the TN SPF SIG. This sample was derived from the twenty-nine community coalitions initially enrolled in the 2005-2010 cohort of the TN SPF SIG. Two of those coalitions prematurely ended their participation in the SPF SIG, prior to the 2009 TN SPF SIG Capacity survey data collection. Thus, the study sample was narrowed to 27 coalitions and their 88 implementations of substance use prevention interventions. The sample was stratified based on several factors depicted in Figure 2.1 and described below. We only examined coalitions implementing evidence-based interventions. Sustainability is a process that should begin before initial grant funding ends, and part of that process is ensuring that interventions used have evidence for their effectiveness (Scheirer & Dearing, 2011). Interventions were considered evidence-based if they were listed as effective in one of the following: (1) the Substance Abuse and Mental Health Services Administration (SAMHSA)'s National Registry of Evidence-based Programs and Practices (Substance Abuse and Mental Health Services Administration, 2016), (2) the U.S. Department of Health and Human Services (DHHS)'s Community Preventative Services Task Force systematic reviews (Shults et al., 2001), or (3) the Office of Juvenile

Justice and Delinquency Prevention guide to evidence-based strategies to reduce underage drinking (listed as medium to high priority; (Pacific Institute for Research and Evaluation (PIRE), 2009).

Twenty-one of the twenty-seven SPF SIG coalitions had implemented evidence-based interventions, as reported in the TN SPF SIG Coalition Capacity survey in the 2009 SPF SIG national cross-site evaluation survey, the Community Level Instrument (ICPSR, 2016). Each of these coalitions had implemented between one and four evidence-based interventions, for a total of 37 implementations. The remaining six coalitions implemented interventions that were not evidence based. Ultimately, we sought to interview key informants who had been involved in implementation of evidence-based interventions during the SPF-SIG at these 21 community coalitions.

The research staff first attempted to contact by email individuals from the 21 coalitions that implemented evidence-based interventions. Record data from the Prevention Alliance of Tennessee provided contact information for current employees of each coalition (Prevention Alliance of Tennessee, 2015). The contact person at each coalition was asked to identify a primary key informant, the person with most knowledge of the intervention during its implementation at the time of the TN SPF SIG. In most cases, the primary key informant was a former or current coalition director. Fifteen primary key informants from 14 county coalitions (one coalition had a different key informant for each of its two intervention) agreed to participate in this study. Contact was unable to be made with the remaining coalition contacts; no one refused to participate in this study. Twenty-nine total interviews were conducted (many key informants

participated in more than one interview because several interventions were implemented in their county) with primary key informants.

Measures

Key Informant and Intervention Background Information. There were several questions to obtain background information about the key informant (for example, if the coalition was their primary place of employment and how long they had worked there). These items are not being examined here. Additional questions were designed to gather basic information about the sustainability of the intervention (i.e., if it was still operating and, if not, when it ceased operation; previously reported by Johnson and colleagues (2017)).

Motivation for Sustainability Interview. We created a measure of motivational attributes associated with sustainability. This measure drew upon motivational factors associated with implementation, as defined by Scaccia and colleagues (2015) as “perceived incentives and disincentives that contribute to the desirability to use an innovation,” of *relative advantage*, *compatibility*, *complexity*, *trialability*, and *priority* (Scaccia et al., 2015). In addition to the factors identified by Scaccia and colleagues (2015), we identified two factors from the education literature that contribute to motivation to adopt and sustain innovations, *relationships among stakeholders* and *stakeholder ownership* (Gersten et al., 1997; Lam et al., 2010; Wong, 1997), which have also been identified as important for intervention sustainability (Johnson et al., 2004). Each of these seven motivational factors is defined in Table 2.1.

The project investigators carefully selected these motivational factors based on the extant literature, their expertise in the field of implementation and with the goal of creating a short survey that would be acceptable to stakeholders participating in this study. Twenty-five total items were developed, comprised of three to four items corresponding to each of the motivational factors identified for the survey. Four items were written to measure relative advantage (e.g., ‘This intervention was better than other strategies that could have been implemented to address the same problems/issues’). Four items were written to measure compatibility (e.g., ‘This intervention fit well with other substance abuse prevention interventions implemented in the community’). Three items were written to measure complexity (e.g., ‘There were so many components to this intervention that it was hard to understand all the pieces’). Four items were written to measure trialability (e.g., ‘Those involved in implementing this intervention regularly made minor adjustments to the intervention to improve its success’). Three items were written to measure priority (e.g., ‘This intervention was one of the top three priorities of the organization that led its implementation’). Four items were written to measure relationships among stakeholders (e.g., ‘The key stakeholders involved with this intervention were able to collaborate effectively’). Three items were written to measure stakeholder ownership (e.g., ‘The stakeholders who were involved in this intervention had influence on the design of the intervention’). See Table 2.1 for full list of items and related constructs. The reliability of these items was previously calculated by Johnson and colleagues (2017) and was found to be strong within each construct (α between .76 to .85). The participants were asked to rate the truth of the statements for their organization during the SPF SIG on a scale of one to four: 1 = strongly disagree, 2 =

disagree, 3 = agree, and 4 = strongly agree. Scores are calculated by averaging the scores on items within each motivational factor. The measure also contains one qualitative question, “What do you think the biggest factor was in this intervention being sustained [or not being sustained] to the present?” Responses to this question were transcribed by the interviewer.

Coalition Capacity Survey. The secondary data gathered to measure organizational capacity is derived from the Coalition Capacity Survey, a survey designed by Collins and colleagues (2009) to measure capacity of coalitions participating in both the TN SPF SIG and other SPF SIG interventions in other states. The constructs measured in 2009 were coalition structure, formal linkages, prevention champions, policies and procedures, staffing resources, funding resources, technology resources, data resources, prevention expertise, and coalition formalization. Staffing resources and technology resources constructs were later determined to be poor measures of capacities due to the close connection of staffing to SPF SIG funding and the irrelevance of frequency of use of various types of technology to capacities. Thus, those constructs were dropped, and the survey constructs and items of interest for this study consisted of nine constructs containing 49 items, the majority of which followed a Yes or No response format. For constructs that contained items with Yes or No responses (coalition structure, formal linkages, prevention champions, policies and procedures, funding resources, and data resources), scores were calculated by adding up the number of Yes responses. The items that were not counts of Yes/No responses were within the constructs of staffing resources, technology resources, expertise, and coalition formalization. The score for staffing resources was computed by adding the number of full time staff and half of the

number of part-time staff. The score for technology resources was calculated by adding responses from a Likert scale ranging from never (1) to often (4) assessing the frequency of use of hardware and software. Expertise was calculated by calculating the average score on a four-point Likert scale ranging from poor (1) to excellent (4) across items indicating the level of expertise in implementing the substance use prevention strategies. Coalition formalization was a count of 7 “yes” responses to items such as presence of written bylaws and up-to-date membership lists.

This scale has adequate reliability. The internal consistency for seven of the constructs was acceptable to strong (α between .72 to .95) by common standards (Nunnally, 1978) and acceptable by standards for early stages of research (George & Mallery, 2003; Nunnally, 1967) for the remaining constructs of technology resources ($\alpha=.61$) and data resources ($\alpha=.64$). The content validity of items is based on review by experts in the field. Validity can also be inferred from expected increases in these capacity constructs over time, which was expected because one of the goals of the SPF SIG was capacity building. Analyses of change in capacity between the initial assessment in 2007 and the final assessment in 2009 showed that there were at least marginally significant ($p<.10$) increases over time for the constructs of policies and procedures, staffing resources, funding resources, data resources, and technology resources.

These surveys were completed by coalition directors at all coalitions, and by a second additional staff person at six coalitions. It was determined that the first key informant was most knowledgeable in these cases, and therefore data from the first key informant were used for five of these six coalitions. For the remaining coalition, some

data from the first key informant were missing, so the responses from the second key informant were used.

Procedure

Primary data. The research team conducted interviews between September 2015 and March 2016, approximately 5 ½ years after the TN SPF SIG grant funding ended. These interviews included questions to ascertain the sustainability status of EBPIs (i.e., number of years interventions were sustained) and the Motivation for Sustainability Interview, which measured motivational attributes purported to predict sustainability. This study was deemed exempt from IRB oversight by the PIRE IRB, due to the minimal risk of the study. Twenty-six of the 29 primary key informant interviews were completed via telephone. After contact information for key informants was obtained, the interviewer (a PhD student) followed up with a phone call and scheduled a 20-30-minute interview. During the phone interview, the Motivation for Sustainability Interview was completed to ascertain sustainability status and inquire about intervention attributes of the interventions implemented during the TN SPF SIG. The interviewer read the Motivation for Sustainability Interview questions (see Appendix) to the participant and entered responses directly into an online database. One primary key informant was unable to complete a telephone call and therefore completed interviews about three intervention implementations via a web-based survey that contained the same questions as the telephone interview. The participants were offered \$15 for each interview they completed.

Secondary data. Secondary data containing information about organizational capacity as recorded in the Coalition Capacity Survey was retrieved from the Evaluation of Tennessee SPF-SIG Local Capacity Building: Final Report (Collins et al., 2009). This survey was measured at two time points, in 2007 and in 2009, which allows us to use change in different coalition capacities as a predictor of sustainability. However, coalition formalization was only measured in 2009.

Data analysis. We first conducted a priori power analyses using G* Power Version 3.1.93 (Faul, Erdfelder, Buchner, & Lang, 2009) to determine the recommended sample size to detect statistical significance at the error rate of 0.1. Due to the small sample size, $p < .10$ will be the criterion for interpreting effects, which corresponds to $r = .32$. These criteria represent medium effects in the social sciences (Cohen, 1988), which should provide suggestions for future research with larger samples. This is also consistent with our previous published study using these data (Johnson et al., 2017). Due to the pilot nature of this study, which aims to build hypotheses and not to confirm existing hypotheses, Bonferroni corrections were not applied (Bender & Lange, 2001).

We used IBM SPSS Statistics (Version 24) to conduct hierarchical multiple regression analyses. These analyses were used to examine if capacity factors (coalition formalization, change in coalition structure, change in data resources, and change in funding resources) moderated the relationship between motivational attributes (trialability and relative advantage) and years interventions were sustained. All possible interactions were tested in separate regression models. We also conducted an exploratory analysis including all predictors (coalition formalization, change in coalition structure, change in

data resources, change in funding resources, trialability, relative advantage, and the interactions between each capacity factor and motivation factor) in one regression model.

Finally, the responses from the qualitative question in the Motivation for Sustainability Interview were analyzed and themes were extracted. Responses about each intervention ranged from one to seven sentences. The brevity of qualitative responses allowed for coding to be conducted with a simple spreadsheet. One of the researchers independently conducted the qualitative analysis. Thematic analysis was used in both theoretical and inductive ways (Braun & Clarke, 2006). Initially, a deductive ‘top down’ method was applied, whereby themes were coded based on our theory of motivation for sustainability attributes. This theory purported that motivation factors of *relationships among stakeholders, ownership of the intervention, relative advantage, compatibility, complexity, trialability, and priority* would predict sustainability. An inductive ‘bottom up’ approach was also used to identify emerging themes that were not grounded in our theory but were linked strongly to the data.

Table 2.1 Motivational Attributes and Definitions

<u>Intervention</u> <u>Attribute</u>	<u>Definition</u>
Relative Advantage	“Degree to which a particular innovation is perceived as being better than what it is being compared against; can include perceptions of anticipated outcomes” (Scaccia et al., 2015)
Compatibility	“Degree to which an innovation is perceived as being consistent with existing values, cultural norms, experiences, and need of potential users” (Scaccia et al., 2015)
Complexity	“Degree to which an innovation is perceived as relatively difficult to understand and use” (Scaccia et al., 2015)
Trialability	“Degree to which an innovation can be tested and experimented with” (Scaccia et al., 2015)
Priority	“Extent to which the innovation is regarded as more important than others” (Scaccia et al., 2015)
Relationships among key stakeholders	“Positive relationships among an innovation’s developers, organizational decision-makers, implementers, and evaluators and a supportive peer network” (Johnson et al., 2004)
Ownership of the intervention	“Personal commitment to an innovation process” (Johnson et al., 2004)

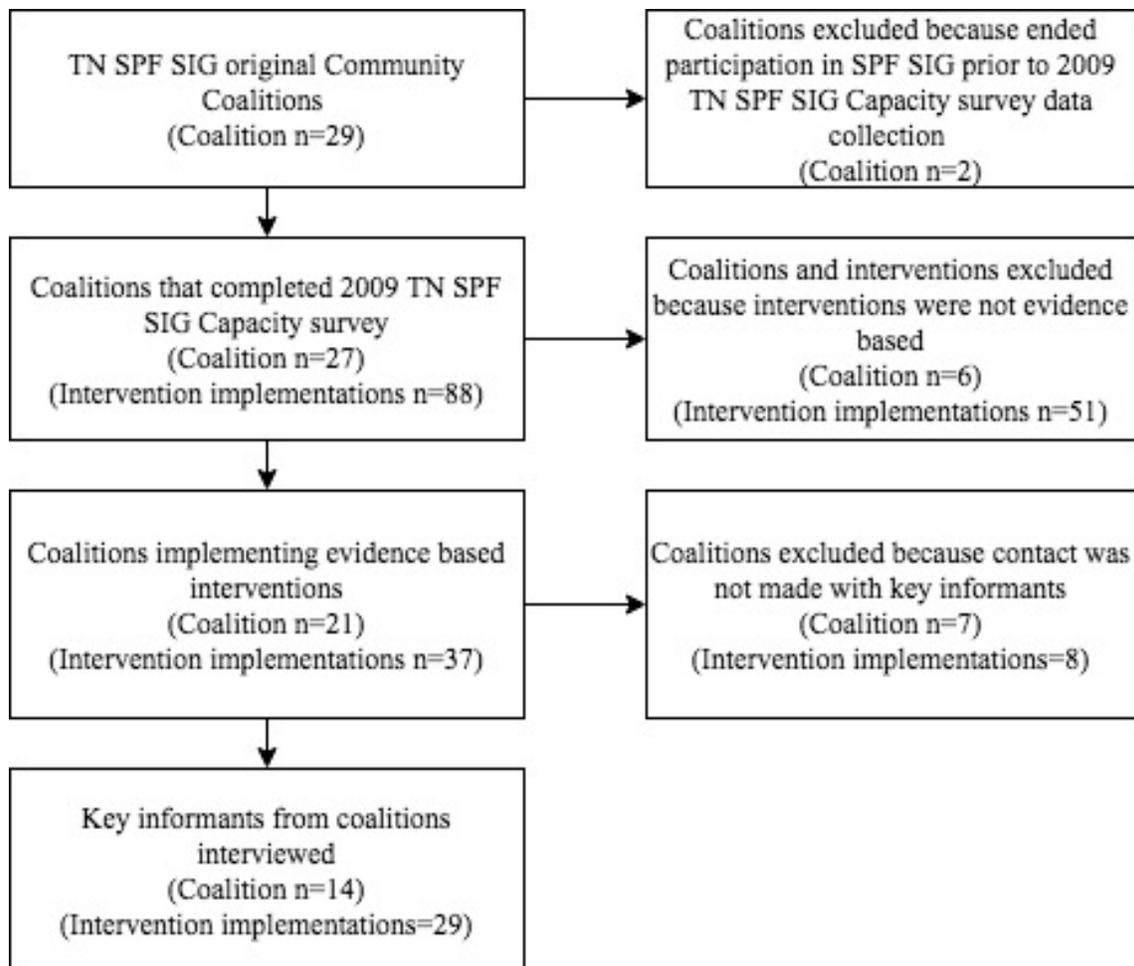


Figure 2.1 Flow Diagram – Selection of Participants

CHAPTER 3

RESULTS

Power Analysis

For multiple linear regression analyses with three total predictors (dependent variable, moderating variable, and their interaction), we set an alpha error probability of 0.1 with a power of .8. To detect a large effect (f^2 0.35), a sample size of 20 would be necessary, and to detect a medium effect size (f^2 of 0.15), a sample size of 43 would be necessary. The current sample does not yield adequate power to detect medium effects, but it is adequate to detect large effects.

Missing Data

Most variables of interest did not have any data missing. Change in funding resources had 5 missing data points (n=24, 82.8% of data present). Listwise deletion was used to eliminate all variables in which there was missing data. In addition, the qualitative question had 3 missing responses (n=26, 89.7% of data present).

Assumptions

The assumptions of multiple regression moderation models were examined. First, we examined the normality of the residuals using Predicted Probability (P-P) plots, and this assumption was met. The linearity of the relationship between predictors and years the intervention was sustained was examined by plotting the data. The assumption of

linearity appears to be violated. We also examined the standardized residuals versus predicted values, and this assumption appears to be violated, as the plot did not demonstrate homoscedasticity. Multicollinearity was addressed by mean-centering all variables. Linearity of Multicollinearity was then assessed by examining Tolerance and VIF values, which indicated absence of multicollinearity (Tolerance >0.1 and VIF <10) for all for all hierarchical multiple linear regressions. However, in the exploratory multiple regression that included all predictors, there collinearity was indicated for several predictors, despite mean-centering. Linear regression is generally robust to minor violations of assumptions (Cohen, Cohen, West, & Aiken, 2003). Despite violating some assumptions, we continued with a regression analysis due to the pilot nature of this study.

Hierarchical Multiple Linear Regression Results

Multiple linear regression was conducted using only relative advantage and trialability as independent variables, because they were found in the correlation analysis above to correlate with years intervention sustained. Additionally, because of sample size limitations, eight separate regression analyses were conducted, entering the four capacity variables one at a time to examine their interaction with the two independent variables. Thus, a series of hierarchical multiple regressions were conducted, all with the outcome variable of years interventions were sustained. To test the hypothesis that years interventions are sustained is a function of multiple factors that include both motivation and capacity, and more specifically whether capacities of interest (coalition formalization, change in coalition structure, change in data resources, and change in funding resources) moderate the relationship between motivational factors of interest (trialability and relative advantage) and years interventions were sustained, hierarchical

multiple regression analyses were conducted to test all interactions. The motivation variable (trialability or relative advantage) was entered in the first step of each model, the capacity factor (coalition formalization, change in coalition structure, change in data resources, or change in funding resources) was added in the second step, and the interaction between the two was entered as the third step. To avoid multicollinearity with the interaction term, all variables were mean-centered and interaction terms were created (Aiken & West, 1991). Results of each model are presented in tables, including B , SE , β , t , and p values, as well as R^2 , ΔR^2 , F for ΔR^2 , and df values.

Trialability and coalition formalization. The first regression model examined whether coalition formalization (i.e., having bylaws, membership lists, and orientation materials) moderated the relationship between trialability (i.e., the degree to which an innovation can be tested and experimented with) and years interventions were sustained (see Table 3.1). In the first step of this regression model, trialability was entered, and was found to significantly predict years interventions were sustained, $R^2 = .32$, $F(1,27) = 3.09$, $p = .09$. In the second step, coalition formalization was entered. Together, trialability and coalition formalization accounted for a significant amount of variance in years interventions were sustained, $R^2 = .25$, $F(2,26) = 4.28$, $p = .03$. Next, the interaction term between trialability and coalition formalization was added to the model, which accounted for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 = .11$, $\Delta F(1,25) = 4.19$, $p = .05$. Thus, coalition formalization was a significant moderator ($p < .1$) of the relationship between trialability and years interventions were sustained. Figure 3.1 shows that there is a strong relationship between trialability and years interventions are sustained for low levels of coalition formalization, but not high levels.

Trialability and change in coalition structure. This regression model tested whether change in coalition structure (i.e., change from 2007 to 2009 in presence of needs assessments, planning, evaluation, and efforts to sustain) moderated the relationship between trialability and years interventions were sustained (see Table 3.2). In the first step, trialability was entered (as described above). In the second step of this regression model, two variables were included: trialability and change in coalition structure. These variables accounted for a significant amount of variance in years interventions were sustained, $R^2 = .22$, $F(2,26) = 3.76$, $p = .04$. Next, the interaction term between trialability and change in coalition structure was added to the model, which did not account for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 = .01$, $\Delta F(1,25) = .26$, $p = .61$. Thus, change in coalition structure was not a significant moderator of the relationship between trialability and years interventions were sustained.

Trialability and change in data resources. This regression model tested whether change in data resources (i.e., change from 2007 to 2009 in presence of data resources) moderated the relationship between trialability and years interventions were sustained (see Table 3.3). In the first step of this regression model, trialability was entered (as described above). In the second step, two variables were included: trialability and change in data resources. These variables accounted for a significant amount of variance in years interventions were sustained, $R^2 = .335$, $F(2,26) = 6.552$, $p = .005$. Next, the interaction term between trialability and change in data resources was added to the model, which accounted for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 = .13$, $\Delta F(1,25) = 6.26$, $p = .02$. Thus, change in data resources was a

significant moderator ($p < .05$) of the relationship between trialability and years interventions were sustained. Figure 3.2 shows that there is a relationship between trialability and years interventions were sustained when there was negative or no change in data resources, but not when there were positive changes in data resources.

Trialability and change in funding resources. This regression analysis examined whether change in funding resources (i.e., change from 2007 to 2009 in the presence of new external funding or reallocated internal funding) moderated the relationship between trialability and years interventions were sustained (see Table 3.4). There was missing data for change in funding resources, so this regression analysis only includes a sample size of 24. In the first step of this regression model, trialability was entered. It was not shown to account for significant variance in years interventions were sustained, $R^2 = .31$, $F(1,22) = 2.34$, $p = .14$. In the second step, two variables were included: trialability and change in funding resources. These variables accounted for a significant amount of variance in years interventions were sustained, $R^2 = .208$, $F(2,21) = 2.756$, $p = .087$. Next, the interaction term between trialability and change in funding resources was added to the model, which accounted for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 = .157$, $\Delta F(1,20) = 4.932$, $p = .038$. Thus, change in funding resources was a significant moderator ($p < .05$) of the relationship between trialability and years interventions were sustained. Figure 3.3 shows no variability in years sustained when there was a positive change in funding, but there was a positive relationship between trialability and years sustained when there was no change in funding resources.

Relative advantage and coalition formalization. This regression analysis examined whether coalition formalization moderated the relationship between relative advantage (i.e., the degree to which a particular innovation is perceived as being better than what it is being compared against) and years interventions were sustained (see Table 3.5). In the first step of this regression model, relative advantage was entered. Relative advantage accounted for a significant amount of variance in years interventions were sustained, $R^2 = .10$, $F(1,27) = 2.94$, $p = .10$. In the second step, two variables were included: relative advantage and coalition formalization. These variables accounted for a significant amount of variance in years interventions were sustained, $R^2 = .22$, $F(2,26) = 3.60$, $p = .04$. Next, the interaction term between relative advantage and coalition formalization was added to the model, which accounted for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 = .19$, $\Delta F(1,25) = 7.92$, $p = .01$. Thus, coalition formalization was a significant moderator ($p < .05$) of the relationship between relative advantage and years interventions were sustained. Figure 3.4 demonstrates a linear relationship between relative advantage and years interventions were sustained when coalition formalization was low, but not when it was high.

Relative advantage and change in coalition structure. This regression analysis examined whether change in coalition structure moderated the relationship between relative advantage and years interventions were sustained (see Table 3.6). In the first step of this regression model, relative advantage was entered (as described above). In the second step, two variables were included: relative advantage and change in coalition structure. These variables accounted for a significant amount of variance in years interventions were sustained, $R^2 = .22$, $F(2,26) = 3.15$, $p = .06$. Next, the interaction term

between relative advantage and change in coalition structure was added to the model, which did not account for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 < .01$, $\Delta F(1,25) = .08$, $p = .79$. Thus, change in coalition structure was not a significant moderator of the relationship between relative advantage and years interventions were sustained.

Relative advantage and change in data resources. This regression analysis examined whether change in data resources moderated the relationship between relative advantage and years interventions were sustained (see Table 3.7). In the first step of this regression model, relative advantage was included (as described above). In the second step, two variables were included: relative advantage and change in data resources. These variables accounted for a significant amount of variance in years interventions were sustained, $R^2 = .31$, $F(2,26) = 5.81$, $p = .01$. Next, the interaction term between relative advantage and change in data resources was added to the model, which accounted for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 = .11$, $\Delta F(1,25) = 4.80$, $p = .04$. Thus, change in data resources was a significant moderator ($p < .05$) of the relationship between relative advantage and years interventions were sustained. Figure 3.5 shows a positive linear relationship between relative advantage and years sustained when there is negative or no change in data resources. However, when there was positive change in data resources, the relative advantage was slightly negatively correlated with years interventions were sustained.

Relative advantage and change in funding resources. This regression analysis tested whether change in funding resources moderated the relationship between relative advantage and years interventions were sustained (see Table 3.8). There was missing data

for change in funding resources, so this regression analysis only includes a sample size of 24. In the first step of this regression model, relative advantage was entered. Relative advantage did not account for a significant amount of variance in years interventions were sustained, $R^2 = .34$, $F(1,22) = 2.84$, $p = .11$. In the second step, two variables were included: relative advantage and change in funding resources. These variables accounted for a significant amount of variance in years interventions were sustained, $R^2 = .227$, $F(2,21) = 3.082$, $p = .067$. Next, the interaction term between relative advantage and change in funding resources was added to the model, which did not account for a significant proportion of the variance in years interventions were sustained, $\Delta R^2 = .042$, $\Delta F(1,20) = 1.135$, $p = .299$. Thus, change in funding resources was not a significant moderator of the relationship between relative advantage and years interventions were sustained.

Summary of Hierarchical Multiple Linear Regression Results

We hypothesized that the relationship between motivation factors of relative advantage and trialability would be moderated by capacity factors of coalition formalization, change in coalition structure, change in data resources, and change in funding resources. As expected, we found that change in coalition formalization, change in data resources, and change in funding moderated the relationship between trialability and years interventions were sustained. For low levels of coalition formalization, change in data resources, and change in funding, there was a strong relationship between trialability and years interventions were sustained, but not for high levels. However, contrary to our hypothesis, change in coalition structure did not moderate the relationship between trialability and years interventions were sustained.

As expected, change in coalition formalization and change in data resources also moderated the relationship between relative advantage and years interventions were sustained. Similarly, for low levels of coalition formalization and change in data resources, there was a strong relationship between relative advantage and years interventions were sustained, but not for high levels. Contrary to our hypothesis, change in coalition structure and change in funding resources did not moderate the relationship between relative advantage and years interventions were sustained.

Exploratory multiple regression.

This regression analysis explored the effects of all 14 predictors (coalition formalization, change in coalition structure, change in data resources, change in funding resources, trialability, relative advantage, trialability x coalition formalization, trialability x change in coalition structure, trialability x change in data resources, trialability x change in funding resources, relative advantage x coalition formalization, relative advantage x change in coalition structure, relative advantage x change in data resources, and relative advantage x change in funding resources) on years interventions were sustained (see Table 3.9). Due to missing data for change in funding resources, this regression analysis had a sample size of 24. A significant regression equation was found, $R^2 = .80$, $F(14,9) = 2.49$, $p = .09$. However, there were no main effects for any predictors on years interventions were sustained.

Qualitative analysis results

The 26 responses to the Motivation for Sustainability Interview question, “What do you think the biggest factor was in this intervention being sustained [or not being

sustained] to the present?” were coded into themes. It appeared that one participant did not understand the question, and this response was dropped. All other participants (n=25) provided between one and three reasons why they believed sustainability was achieved or not (see Table 3.10). Relationships among stakeholders was most frequently (n=11) mentioned as important to an intervention’s sustainability. For example, one respondent noted, “We have one police department who continued to do compliance checks on a regular basis... Their influence was very helpful.” Several responses about interventions that were not sustained were coded as “relationships among stakeholders” as well because there was a lack of compatibility or priority on the part of a stakeholder group outside of the coalition. For example, one intervention ceased because “there was a belief among law enforcement that it was not necessary.” Another intervention stopped operating because owners of establishments “believed they were well versed and didn’t need additional training.” Despite the interest of the coalition, the interventions did not continue because of disinterest of stakeholders. Compatibility was second most described (n=8) as important for sustainability. For example, one respondent reported that “looking at arrest records and attendance rates... we just look at those things and know there is a need for it.”

Two themes emerged from the data that were not related to our motivation theory. First, observability (i.e., the degree to which the results of the innovation are visible; (Rogers, 1995) emerged as the third most frequently mentioned theme (n=7). A respondent said that their intervention “really does change the community norm that drinking and driving is ok.” Another theme that emerged in five of the responses was the importance of funding. While funding was not one of our constructs for motivation for

sustainability, it was a capacity factor included in our analysis. In some cases, this was also coded as relationship among stakeholders, if the respondent also specifically mentioned that the state or another agency was supportive of the intervention. For example, a respondent who was reporting on an intervention that was no longer in operation said “The military cut the funding for it.” Of note, funding was always mentioned along with another factor related to motivation. Interestingly, relative advantage and trialability were the least frequently mentioned as important for sustainability.

Summary of qualitative analysis

We hypothesized that key informants would identify motivation attributes as key factors for sustaining their interventions. Consistent with our hypothesis, each motivation factor (i.e., relationships among stakeholders, ownership of the intervention, relative advantage, compatibility, complexity, trialability, and priority) was reported at least once as factors that contributed to intervention sustainability. Contrary to quantitative findings that only found relationships between relative advantage and trialability with years interventions were sustained, the key informants reported relationships among stakeholders and compatibility most frequently and relative advantage and trialability least frequently.

In addition to a deductive process, we also looked to the data to inductively identify themes. We found that key informants frequently reported that observability of the interventions was important for sustainability. They also felt that funding (a capacity factor) was critical for sustaining their interventions.

Table 3.1 Hierarchical Multiple Regression for Trialability and Coalition Formalization with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	t	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Trialability	1.10	.63	.32	1.76	.09*				
Total Step 1						.10	.10	3.09*	27
2.	--	--	--	--	--	--	--	--	--
Trialability	1.04	.58	.30	1.78	.09*				
Coalition Formalization	.74	.33	.38	2.24	.03**				
Total Step 2						.25	.15	5.01*	26
3.	--	--	--	--	--	--	--	--	--
Trialability	1.23	.56	.36	2.20	.04**				
Coalition Formalization	.85	.32	.44	2.69	.01**				
Trialability x Coalition Formalization	-1.48	.73	-.34	-2.05	.05*				
Total Step 3						.36	.11	4.19*	25
<p><i>Note:</i> Trialability and Coalition Formalization were centered at their means. *<i>p</i><.10, **<i>p</i><.05.</p>									

Table 3.2 Hierarchical Multiple Regression for Trialability and Change in Coalition Structure with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	<i>t</i>	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Trialability	1.10	.63	.32	1.76	.09*				
Total Step 1						.10	.10	3.09*	27
2.	--	--	--	--	--	--	--	--	--
Trialability	1.23	.60	.36	2.06	.05*				
Change in Coalition Structure	.81	.40	.35	2.02	.05*				
Total Step 2						.22	.12	4.08*	26
3.	--	--	--	--	--	--	--	--	--
Trialability	1.39	.68	.40	2.04	.05*				
Change in Coalition Structure	.73	.44	.32	1.68	.11				
Trialability x Change in Coalition Structure	-.56	1.08	-.11	-.51	.61				
Total Step 3						.23	.01	.26	25
<i>Note:</i> Trialability and Change in Coalition Structure were centered at their means. * <i>p</i> <.10, ** <i>p</i> <.05.									

Table 3.3 Hierarchical Multiple Regression for Trialability and Change in Data Resources with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	t	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Trialability	1.10	.63	.32	1.76	.09*				
Total Step 1						.10	.10	3.09*	27
2.	--	--	--	--	--	--	--	--	--
Trialability	.81	.56	.24	1.45	.16				
Change in Data Resources	.70	.23	.49	3.02	.01**				
Total Step 2						.34	.23	9.09**	26
3.	--	--	--	--	--	--	--	--	--
Trialability	.69	.51	.20	1.35	.19				
Change in Data Resources	.52	.22	.36	2.33	.03**				
Trialability x Change in Data Resources	-1.35	.54	-.39	-2.50	.02**				
Total Step 3						.47	.13	6.26**	25
<i>Note:</i> Trialability and Change in Data Resources were centered at their means.									
* <i>p</i> <.10, ** <i>p</i> <.05.									

Table 3.4 Hierarchical Multiple Regression for Trialability and Change in Funding Resources with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	t	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Trialability	1.23	.80	.31	1.53	.14				
Total Step 1						.10	.10	2.34	22
2.	--	--	--	--	--	--	--	--	--
Trialability	.95	.76	.24	1.21	.24				
Change in Funding Resources	.93	.54	.34	1.72	.1				
Total Step 2						.21	.11	2.96	21
3.	--	--	--	--	--	--	--	--	--
Trialability	1.56	.77	.39	2.02	.06*				
Change in Funding Resources	1.11	.50	.41	2.21	.04**				
Trialability x Change in Funding Resources	-2.62	1.18	-.44	-2.22	.04**				
Total Step 3						.37	.16	4.93**	20
<p><i>Note:</i> Trialability and Change in Funding Resources were centered at their means. *<i>p</i><.10, **<i>p</i><.05.</p>									

Table 3.5 Hierarchical Multiple Regression for Relative Advantage and Coalition Formalization with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	t	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Relative Advantage	1.14	.66	.31	1.71	.10*				
Total Step 1						.10	.10	2.94*	27
2.	--	--	--	--	--	--	--	--	--
Relative Advantage	.91	.64	.25	1.42	.17				
Coalition Formalization	.68	.34	.35	1.99	.06*				
Total Step 2						.22	.12	3.94*	26
3.	--	--	--	--	--	--	--	--	--
Relative Advantage	2.06	.70	.57	2.94	.01**				
Coalition Formalization	.52	.31	.27	1.70	.10				
Relative Advantage x Coalition Formalization	-	.82	-	-	.01**				
Total Step 3						.41	.19	7.92**	25
<p><i>Note:</i> Relative Advantage and Coalition Formalization were centered at their means. *<i>p</i><.10, **<i>p</i><.05.</p>									

Table 3.6 Hierarchical Multiple Regression for Relative Advantage and Change in Coalition Structure with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	<i>t</i>	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Relative Advantage	1.14	.66	.31	1.71	.10*				
Total Step 1						.10	.10	2.94*	27
2.	--	--	--	--	--	--	--	--	--
Relative Advantage	1.13	.64	.31	1.77	.09*				
Change in Coalition Structure	.72	.41	.31	1.77	.09*				
Total Step 2						.20	.10	3.13*	26
3.	--	--	--	--	--	--	--	--	--
Relative Advantage	1.15	.65	.32	1.76	.09*				
Change in Coalition Structure	.67	.46	.29	1.46	.16				
Relative Advantage x Change in Coalition Structure	-.47	1.73	-.06	-.28	.78				
Total Step 3						.20	.00	.08	.79
<p><i>Note:</i> Relative Advantage and Change in Coalition Structure were centered at their means. *<i>p</i><.10, **<i>p</i><.05.</p>									

Table 3.7 Hierarchical Multiple Regression for Relative Advantage and Change in Data Resources with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	t	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Relative Advantage	1.14	.66	.31	1.71	.10*				
Total Step 1						.10	.10	2.94*	27
2.	--	--	--	--	--	--	--	--	--
Relative Advantage	.63	.62	.17	1.02	.31				
Change in Data Resources	.69	.24	.48	2.82	.01**				
Total Step 2						.31	.21	7.93**	26
3.	--	--	--	--	--	--	--	--	--
Relative Advantage	.35	.59	.10	.59	.56				
Coalition Formalization	.59	.23	.41	2.55	.02**				
Relative Advantage x Change in Data Resources	-1.20	.55	-.35	-2.19	.04**				
Total Step 3						.42	.11	4.80**	25
<i>Note:</i> Relative Advantage and Change in Data Resources were centered at their means. * <i>p</i> <.10, ** <i>p</i> <.05.									

Table 3.8 Hierarchical Multiple Regression for Relative Advantage and Change in Funding Resources with Years Intervention Sustained as the Outcome

Step and Variable	<i>B</i>	SE	β	t	<i>p</i> -value	<i>R</i> ²	ΔR^2	<i>F</i> for ΔR^2	<i>df</i>
1.	--	--	--	--	--	--	--	--	--
Relative Advantage	1.51	.90	.34	1.69	.11				
Total Step 1						.11	.11	2.84	22
2.	--	--	--	--	--	--	--	--	--
Relative Advantage	1.23	.87	.28	1.42	.17				
Change in Funding Resources	.92	.53	.34	1.75	.10*				
Total Step 2						.23	.11	3.06*	21
3.	--	--	--	--	--	--	--	--	--
Relative Advantage	.96	.95	.22	1.06	.30				
Change in Funding Resources	.88	.53	.33	1.67	.11				
Relative Advantage x Change in Funding Resources	-1.88	1.76	0.21	-1.07	.30				
Total Step 3						.27	.04	1.14	20
<p><i>Note:</i> Relative Advantage and Change in Funding Resources were centered at their means. *<i>p</i><.10, **<i>p</i><.05.</p>									

Table 3.9 Multiple Regression for All Predictors with Years Intervention Sustained as the Outcome

Variable	<i>B</i>	SE	β	t	<i>p</i> -value	<i>R</i> ²	<i>F</i>	<i>df</i>
Relative Advantage	.24	1.29	.05	.13	.90	--		--
Trialability	2.03	1.73	.51	1.18	.27	--		--
Coalition Formalization	.58	.43	.28	1.34	.21	--		--
Change in Coalition Structure	.59	.87	.26	.68	.51	--		--
Change in Data Resources	.46	.38	.31	1.20	.26	--		--
Change in Funding Resources	.02	1.06	.01	.02	.99	--		--
Trialability x Coalition Formalization	-1.05	2.24	-.18	-.47	.65	--		--
Trialability x Change in Coalition Structure	3.89	3.06	.77	1.27	.24	--		--
Trialability x Change in Data Resources	-.45	2.72	-.13	-.16	.87	--		--
Trialability x Change in Funding Resources	-5.39	3.93	-.90	-1.37	.20	--		--
Relative Advantage x Coalition Formalization	-1.06	2.78	-.22	-.38	.71	--		--
Relative Advantage x Change in Coalition Structure	-4.01	3.49	-.45	-1.15	.28	--		--
Relative Advantage x Change in Data Resources	.93	2.14	.27	.44	.67	--		--
Relative Advantage x Change in Funding Resources	.60	6.81	.07	.09	.93	--		--
Total						.80	2.49*	23
<p><i>Note:</i> All variables were centered at their means. *<i>p</i><.10, **<i>p</i><.05.</p>								

Table 3.10 Coded Qualitative Responses in Response to Question About What Participants Believed Drove Sustainability (or Lack of Sustainability)

<u>Sustainability Attribute</u>	<u>Number of mentions</u>
Relationships among stakeholders	11
Compatibility	8
Observability*	7
Priority	5
Ownership	5
Funding*	5
Complexity	3
Relative advantage	2
Trialability	1

*This was an emergent theme that was not part of our model for motivational attributes. However, funding was a capacity factor that we considered in our model.

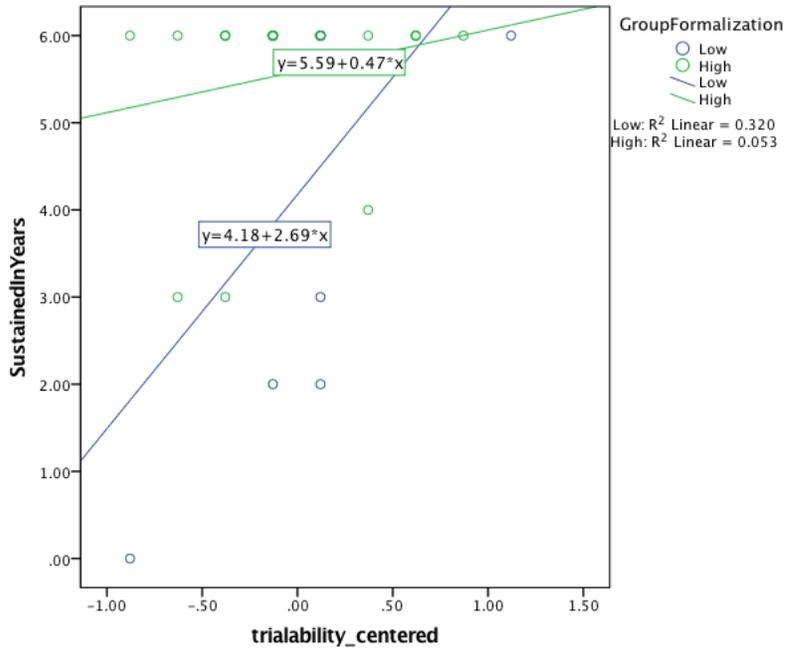


Figure 3.1 Coalition Formalization Moderates the Relationship Between Trialability and Years Interventions Were Sustained

Note: Formalization was grouped into high (count of 6 or 7) and low (count of 4 or 5). As you can see, there is strong relationship between trialability and years interventions were sustained for low levels of formalization, but not for high levels of formalization.

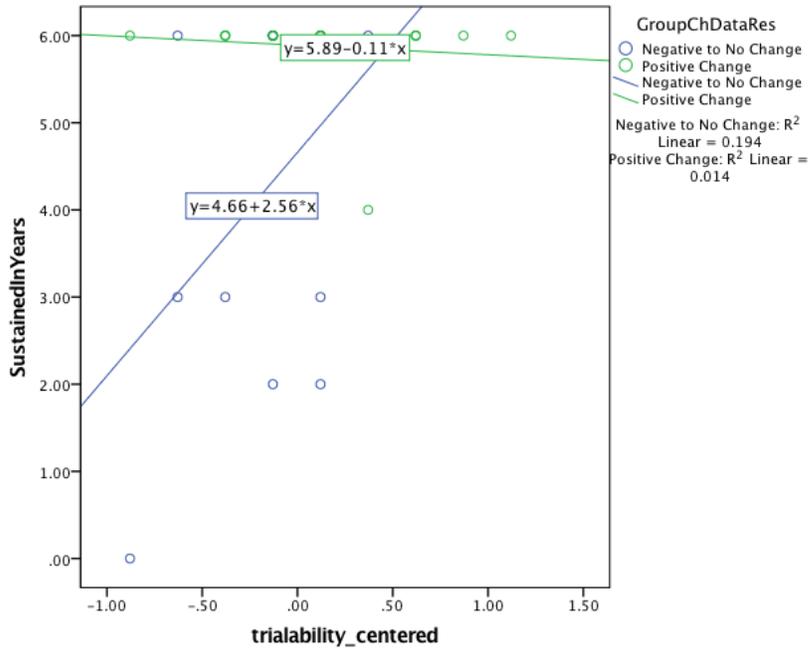


Figure 3.2 Change in Data Resources Moderates the Relationship Between Trialability and Years Interventions Were Sustained

Note: Change in data resources were grouped into negative to no change (-1-0) and positive change (1-3) categories. There is a strong relationship between trialability and years interventions were sustained when there was negative to no change in data resources, but not when there were positive changes in data resources.

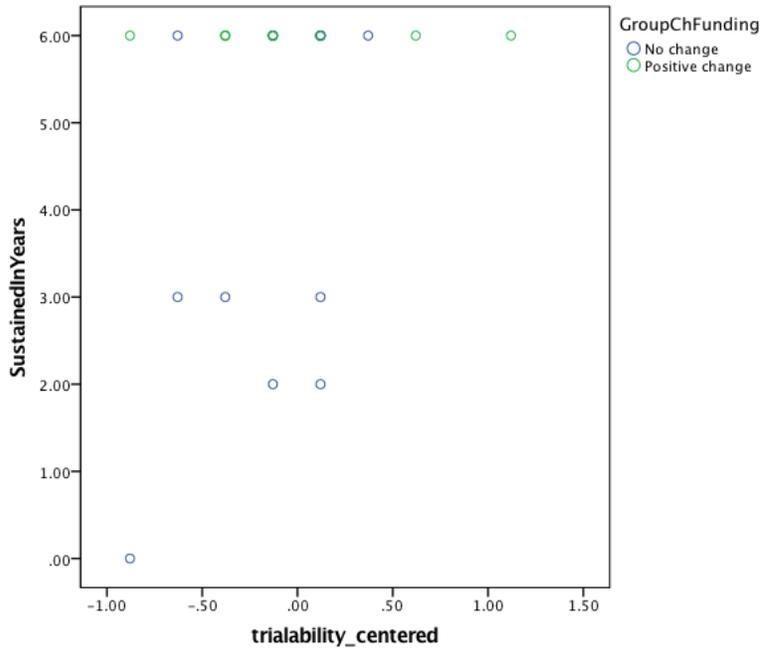


Figure 3.3 Change in Funding Resources Moderates the Relationship Between Trialability and Years Interventions Were Sustained

Note: Changes in funding resources were grouped into no change (0) and positive change (1-2) categories. It can be observed that there is not a linear relationship between trialability and years sustained when changes are positive, but there is a relationship when there is no change in funding resources.

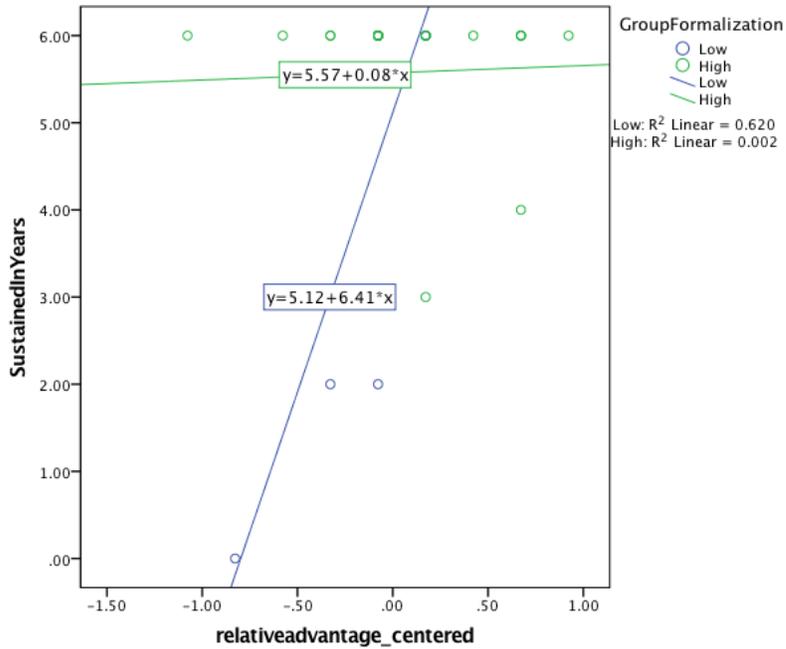


Figure 3.4 Coalition Formalization Moderates the Relationship Between Relative Advantage and Years Interventions Were Sustained

Note: This figure shows that there is a linear relationship between relative advantage and years interventions were sustained when formalization was low, but not when it was high.

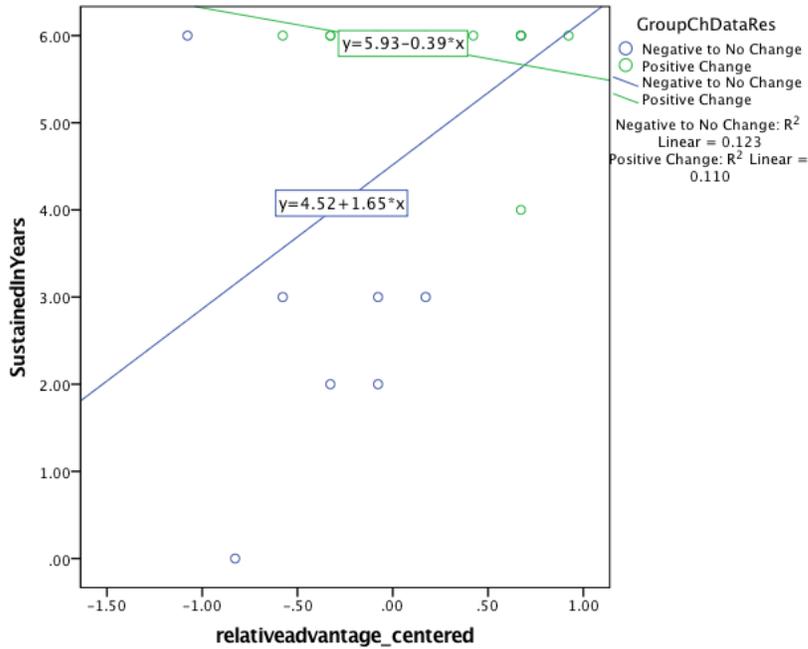


Figure 3.5 Change in Data Resources Moderates the Relationship Between Relative Advantage and Years Interventions Were Sustained

Note: This figure demonstrates a positive linear relationship between relative advantage and years sustained when there is negative or no change in data resources. However, when there was positive change in data resources, the relative advantage was slightly negatively correlated with years interventions were sustained.

CHAPTER 4

DISCUSSION

The primary aim of this study was to examine the moderation of capacity factors on the relationship between motivation and years interventions were sustained. We found that some capacity factors did moderate the relationship between motivational factors (relative advantage and trialability) and years interventions were sustained, which was consistent with previous literature that has implicated multiple levels of factors in (Johnson et al., 2013; Scheirer & Dearing, 2011) suggested the importance of interactions between capacity and innovation factors (Stirman et al., 2012). We found that change in coalition formalization, change in data resources, and change in funding moderated the relationship between trialability and years interventions were sustained. For low levels of coalition formalization, change in data resources, and change in funding, there was a strong relationship between trialability and years interventions were sustained, but not for high levels. In other words, when these capacities are high, trialability is not an important factor in ensuring sustainability. However, when these capacities are low, trialability is an important factor in ensuring sustainability. Change in coalition formalization and change in data resources also moderated the relationship between relative advantage and years interventions were sustained. Similarly, for low levels of coalition formalization and change in data resources, there was a strong relationship between relative advantage and years interventions were sustained, but not for high levels. Thus, when coalition

formalization and change in data resources were high, relative advantage did not make a difference in years interventions were sustained. However, relative advantage was a predictor of years interventions were sustained when coalition formalization and change in data resources were low. These findings suggest that motivational factors may be particularly important for sustaining interventions in low-resourced coalitions.

Our findings complement previous research that suggests that both motivation and capacities are important factors for quality implementation. However, our findings suggest that the relationship between motivational factors and capacities may be more complex than the multiplicative model suggested by Scaccia and colleagues (Scaccia et al., 2015). In our separate regression models, we did find main effects for both motivation and capacity factors in predicting years interventions were sustained, but our moderation analysis showed that some motivation factors may be important for sustainability only when capacities are low. This is consistent with previous research that has demonstrated the importance of motivational attributes that include relative advantage and trialability for sustainability in low-resourced eye care programs in Ghana (Blanchet & James, 2014).

The aim of our exploratory analysis was to examine the predictive value of included all predictors of interest (e.g., motivation factors, capacity factors, and their interactions) in one model on years interventions were sustained. As expected, the results indicated that the motivation and capacity factors of interest, as well as their interactions, significantly predicted years interventions were sustained, accounting for 80% of the variance. However, we did not find significant main effects for any of the variables. Due to multicollinearity and limited power to detect effects with so many predictors in one

model, the effects of each individual variable were likely masked. Despite lack of main effects, the results support our hypothesis that motivation, capacity, and their interactions predict years interventions were sustained.

The qualitative data suggest that participants perceived motivational attributes of relationships among stakeholders, compatibility, and observability, and the capacity of funding to have been critical factors for the sustainability of the interventions implemented by their coalitions. These findings contrast with our previous analysis (Johnson et al., 2017) that did not find a relationship between relationships among stakeholders or compatibility and years interventions were sustained, but are consistent with previous qualitative studies that identified both relationships with key stakeholders and funding as important influences (Stirman et al., 2012). The data also highlight an emergent theme of observability, which was not included in our model of motivation for sustainability, but has been examined in several other studies of implementation and sustainability (Blanchet & James, 2014; Rogers, 1995; Scaccia et al., 2015). Additionally, these findings suggest that funding may be the most important capacity factor for sustainability, which is consistent with our previously published data that linked change in funding to years interventions were sustained (Johnson et al., 2017). Surprisingly, the motivational factors that correlated with years interventions were sustained in our quantitative analyses, relative advantage and trialability, were not frequently mentioned by key informants as reasons why their interventions were sustained or not.

Limitations

There are several limitations to this study. The results should be interpreted keeping in mind the potential for Type I error. We set our p value at .1 in order to increase our power to detect effects due to the small sample size, but this also increased the potential for false positives. We did not apply a correction for familywise error because of the hypothesis-building nature of this study (Bender & Lange, 2001), but this also increases our chances that our findings may be due to chance as the result of multiple statistical tests. In addition, our data violated some assumptions for linear regression, including linearity. There was limited variability in the data, in which only seven interventions in our sample were no longer sustained at follow-up.

Another possible limitation is the retrospective nature of this study. Key informants were asked to respond to the Motivation for Sustainability Interview considering when their intervention was in operation during the SPF SIG, which had ended 5-and-a-half years prior. While retrospective studies are important to collect pilot data (Hess, 2004), they are subject to threats to validity, including testing threat and regression to the mean (Toftthagen, 2012).

The way that we defined sustainability also needs to be taken into consideration in the interpretation of our findings. The outcome variable in this study was number of years sustained, but we did not measure quality of implementation or fidelity to the substance use prevention intervention. Therefore, there may be nuances of the level of implementation that we did not capture by simply asking if an intervention was in operation (Pluye, Potvin, & Denis, 2004). In fact, prior research suggests that most

commonly, programs are only partially sustained at follow-up and the majority of providers do not maintain high fidelity to the program or intervention (Stirman et al., 2012).

Also, there are limitations to the Motivation for Sustainability Interview because it was piloted for the first time for this study and lacks validation of many psychometric properties. The internal consistency for each construct was good, but we were not able to test inter-rater reliability due to limited secondary informants. In addition, the results from the Motivation for Sustainability Interview did not converge with the qualitative data.

Finally, the external validity of these findings may be limited. This research was conducted on a sample of community coalitions from Tennessee that were implementing substance use prevention interventions. The communities that participated in the SPF SIG were diverse in setting (rural, urban, and suburban) and goals (alcohol use, smoking, etc.) and the questions we asked could be generalized to any population, but it is possible that the results could be specific to this cohort of substance use prevention interventions. Johnson, Hays, Center, & Daley (2004) have emphasized that their work in the field of substance abuse prevention can be generalized to other prevention areas, but further research in other areas would be important to empirically challenge this assertion.

Future Directions

This pilot study was designed to build theories for future studies. Our findings lead to several suggestions for future directions. The quantitative data suggest that motivation factors were particularly important for sustaining interventions in coalitions

with lower capacities. Future studies should explore further this relationship by focusing research on low-capacity coalitions. Consistent with prior mixed methods research (Teddlie & Tashakkori, 2003), our study suggests that employing mixed-methods may provide a greater understanding of phenomena related to sustaining interventions than quantitative or qualitative data alone. However, our qualitative component was limited to one question that targeted participants' perceptions about sustainability factors. In the future, more in-depth qualitative research may provide richer data in this area. This research may include semi-structured interviews that explore motivation and capacity factors, while allowing for flexibility to elaborate on information that may be more salient to the participant than the researcher.

In an ideal setting, future sustainability studies would be prospective in nature, include larger sample sizes, and have longer follow-up periods. These qualities would increase power to detect statistical significance, reduce threats to validity posed by retrospective studies, and would decrease the ceiling effect of shorter-term sustainability studies. Longer-term sustainability studies would also increase the ability to study the predictive validity of the Motivation for Sustainability Interview. Future studies would ideally also capture more nuanced details about sustainability, such as level of implementation and fidelity to the intervention.

Existing tools designed for measuring sustainability attributes have been limited to project specific measures that lack validity in other settings (e.g., the Stages of Implementation Completion and Program Sustainability Assessment Tool; (Chamberlain, Brown, & Saldana, 2011; Luke, Calhoun, Robichaux, Elliott, & Moreland-Russell, 2014; Stirman et al., 2012). Future studies would also benefit from examining further the

psychometric properties of the Motivation for Sustainability Interview so that it might be used or adapted to be used in a variety of settings. In addition, exploratory factor analysis would be useful for understanding the convergent and discriminant validity of the items within each factor.

Strengths and Implications

Despite the limitations noted above, this study has many strengths. First, it is one of few studies that examines long-term sustainability (Bond et al., 2014; Peterson et al., 2014). Despite our limited power to detect statistical significance, our sample size is quite good when considering the five-and-a-half year follow up period and is consistent with other similar follow-up studies (e.g., Tibbits et al., (2010). The field of sustainability research is in its infancy (Scheirer & Dearing, 2011), and thus pilot research, despite its limitations, is necessary to provide hypotheses for future projects. We were able to provide suggestions for future studies, particularly in considering the moderating effect that capacities may have on the relationship between motivational attributes and years interventions are sustained. Specifically, we demonstrated that motivation may be critical to sustainability when some capacities are low, but may be less important when capacities are high.

In addition, by incorporating qualitative data, we were able to provide additional avenues for future research. The qualitative data suggested that relationships between stakeholders and compatibility should not be discounted as influential predictors of sustainability, despite the lack of findings in our quantitative analysis. These data also suggest that, unsurprisingly, funding may be the most critical capacity factor for ensuring

sustainability. Finally, the data suggest that future models of motivation for sustainability should incorporate test an additional motivational attribute of observability.

Finally, to echo the sentiments of many researchers before us (e.g., Stirman et al., (2012), it is critical that more time, resources, and funding be dedicated to the study of sustainability, which is an underdeveloped field. The design and implementation of evidence-based interventions are important, but ensuring that they be sustained beyond grant funding is a necessary investment in order to maximize funding and resources. As Johnson and colleagues (2017) have suggested, other researchers should be encouraged to continue this line of research to enhance our understanding of the factors that influence long-term sustainability.

REFERENCES

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage Publications.
- Bender, R., & Lange, S. (2001). Adjusting for multiple testing--when and how? *Journal of Clinical Epidemiology*, *54*, 343-349.
- Blanchet, K., & James, P. (2014). Can international health programmes be sustained after the end of international funding: The case of eye care interventions in Ghana. *BMC Health Services Research*, *14*, 77. doi:10.1186/1472-6963-14-77
- Bond, G. R., Drake, R. E., McHugo, G. J., Peterson, A. E., Jones, A. M., & Williams, J. (2014). Long-term sustainability of evidence-based practices in community mental health agencies. *Administration and Policy in Mental Health and Mental Health Research*, *41*, 228-236. doi:10.1007/s10488-012-0461-5
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77-101. doi:10.1191/1478088706qp063oa
- Chamberlain, P., Brown, C. H., & Saldana, L. (2011). Observational measure of implementation progress in community based settings: The Stages of Implementation Completion (SIC). *Implementation Science*, *6*, 116. doi:10.1186/1748-5908-6-116
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

- Cohen, J., Cohen, P., West, S. G., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (Third Edition ed.). Wahwah, NJ: Lawrence Erlbaum Associates.
- Collins, D., Shamblen, S., Harris, M., Johnson, K., & Dwivedi, P. (2009). *Evaluation of Tennessee SPF-SIG local capacity building: Final report*. Retrieved from PIRE website:
http://www.pire.org/documents/TN_Local_%20Capacity_%20Final_Report.pdf
- Cooper, B. R., Bumbarger, B. K., & Moore, J. E. (2015). Sustaining evidence-based prevention programs: Correlates in a large-scale dissemination initiative. *Prevention Science, 16*(1), 145-157. doi:10.1007/s11121-013-0427-1
- Department of Health and Human Services. (2016). *Justification of Estimates for Appropriations Committees*. Retrieved from SAMHSA website:
<https://www.samhsa.gov/sites/default/files/samhsa-fy-2017-congressional-justification.pdf>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160. doi:10.3758/BRM.41.4.1149
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference* (11.0 update (4th ed.)). Boston, MA: Allyn & Bacon.
- Gersten, R., Vaughn, S., Deshler, D., & Schiller, E. (1997). What we know about using research findings: Implications for improving special education practice. *Journal of Learning Disabilities, 30*, 466-476. doi:10.1177/002221949703000501

- Hess, D. R. (2004). Retrospective studies and chart reviews. *Respiratory Care*, 49, 1171-1174. <http://www.rcjournal.com/contents/10.04/10.04.1171.pdf>
- ICPSR. (2016). Strategic Prevention Framework State Incentive Grant (SPF SIG) national crosssite evaluation. Retrieved from NAHDAP website: <http://www.icpsr.umich.edu/icpsrweb/NAHDAP/studies/28921>
- Johnson, K., Collins, D., Shamblen, S., Kenworthy, T., & Wandersman, A. (2017). Long-term sustainability of evidence-based prevention interventions and community coalitions survival: A five and one-half year follow-up study. *Prevention Science*, 18, 610-621. doi:10.1007/s11121-017-0784-2
- Johnson, K., Collins, D., & Wandersman, A. (2013). Sustaining innovations in community prevention systems: A data-informed sustainability strategy. *Journal of Community Psychology*, 41, 322-340. doi:10.1002/jcop.21540
- Johnson, K., Hays, C., Center, H., & Daley, C. (2004). Building capacity and sustainable prevention innovations: A sustainable planning model. *Evaluation and Program Planning*, 27, 135-149. doi:10.1016/j.evalprogplan.2004.01.002
- Lam, S., Wing-yi Cheng, R., & Choy, H. C. (2010). School support and teacher motivation to implement project-based learning. *Learning and Instruction*, 20, 487-497. doi: 10.1016/j.learninstruc.2009.07.003
- Luke, D. A., Calhoun, A., Robichaux, C. B., Elliott, M. B., & Moreland-Russell, S. (2014). The Program Sustainability Assessment Tool: A new instrument for public health programs. *Preventing Chronic Disease*, 11, 130-184. doi:10.5888/pcd11.130184

National Cancer Institute. Research-Tested Intervention Programs (RTIPs). Retrieved from <https://rtips.cancer.gov/rtips/index.do>

Nilsen, P., Timpka, T., Nordenfelt, L., & Lindqvist, K. (2005). Towards improved understanding of injury prevention program sustainability. *Safety Science, 43*, 815-833. doi:doi:10.1016/j.ssci.2005.08.015

Nunnally, J. C. (1967). *Psychometric theory*. New York, NY: McGraw-Hill.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.

Office of National Drug Control Policy. (2016). *National drug control budget: FY 2017 funding highlights*. Retrieved from https://obamawhitehouse.archives.gov/sites/default/files/ondcp/policy-and-research/fy2017_budget_summary-final.pdf

Pacific Institute for Research and Evaluation (PIRE). (2009). *Strategies to reduce underage alcohol use: Typology and brief overview*. Retrieved from PIRE website: <http://www.pire.org/documents/UDETC/overview-frameworkstrategiesToReduceUnderageDrinking.pdf>

Peterson, A. E., Bond, G. R., Drake, R. E., McHugo, G. J., Jones, A. M., & Williams, J. R. (2014). Predicting the long-term sustainability of evidence-based practices in mental health care: An 8-year longitudinal analysis. *The Journal of Behavioral Health Services & Research, 41*, 337-346. doi:10.1007/s11414-013-9347-x

Piper, D., Stein-Seroussi, A., Flewelling, R., Orwin, R. G., & Buchanan, R. (2012). Assessing state substance abuse prevention infrastructure through the lens of CSAP's Strategic Prevention Framework. *Evaluation and Program Planning, 35*, 66-77. doi:10.1016/j.evalprogplan.2011.07.003

- Pluye, P., Potvin, L., & Denis, J. L. (2004). Making public health programs last: Conceptualizing sustainability. *Evaluation and Program Planning, 27*, 453-453. doi:10.1016/j.evalprogplan.2004.07.001
- Prevention Alliance of Tennessee. (2015). Coalitions. Retrieved from <http://www.tncoalitions.org/coalitions/>
- Rogers, E. M. (1995). *Diffusion of innovations* (5th ed.). New York, NY: The Free Press.
- Scaccia, J. P., Cook, B. S., Lamont, A., Wandersman, A., Castellow, J., Katz, J., & Beidas, R. S. (2015). A practical implementation science heuristic for organizational readiness: $R = MC^2$. *Journal of Community Psychology, 43*, 484-501. doi:10.1002/jcop.21698
- Scheirer, M. A., & Dearing, J. W. (2011). An agenda for research on the sustainability of public health programs. *American Journal of Public Health, 101*, 2059-2067. doi:10.2105/AJPH.2011.300193
- Shults, R. A., Elder, R. W., Sleet, D. A., Nichols, J. L., Alao, M. O., Carande-Kulis, V. G., . . . Task Force on Community Preventive Services. (2001). Reviews of evidence regarding interventions to reduce alcohol-impaired driving. *American Journal of Preventive Medicine, 21*(4 Suppl), 66-88.
- Stirman, S. W., Kimberly, J., Cook, N., Calloway, A., Castro, F., & Charns, M. (2012). The sustainability of new programs and innovations: A review of the empirical literature and recommendations for future research. *Implementation Science, 7*(17).

- Substance Abuse and Mental Health Services Administration. (2016). National registry of evidence based programs and practices. Retrieved from http://nrepp.samhsa.gov/01_landing.aspx
- Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 3-50). Thousand Oaks, CA: Sage Publications.
- Tibbits, M. K., Bumbarger, B. K., Kyler, S. J., & Perkins, D. F. (2010). Sustaining evidence-based interventions under real-world conditions: Results from a large-scale diffusion project. *Prevention Science, 11*, 252-262. doi:10.1007/s11121-010-0170-9
- Toftagen, C. (2012). Threats to validity in retrospective studies. *Journal of the Advanced Practitioner in Oncology, 3*, 181-183.
- U.S. Department of Education. What Works Clearinghouse. Retrieved from <https://ies.ed.gov/ncee/wwc/FWW>
- University of Colorado Boulder. (2017). Blueprints for Healthy Youth Development. Retrieved from <http://www.blueprintsprograms.com/>
- Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science, 4*, 67. doi:10.1186/1748-5908-4-67
- Wong, B. Y. (1997). Clearing hurdles in teacher adoption and sustained use of research-based instruction. *Journal of Learning Disabilities, 30*, 482-485. doi:10.1177/002221949703000503

APPENDIX A

ITEMS FROM MOTIVATION FOR SUSTAINABILITY INTERVIEW

Table A.1 Items from Motivation for Sustainability Interview

<u>Sustainability Construct</u>	<u>Item</u>
Relationships among key stakeholders	The key stakeholders involved with this intervention were able to collaborate effectively.
	The key stakeholders involved with this intervention had a high level of trust in each other.
	They key stakeholders involved with this intervention were able to communicate well with each other.
	The key stakeholders for this intervention had a high level of enthusiasm for the intervention.
Ownership of the intervention	The stakeholders who were involved in this intervention had influence on the design of the intervention.
	The stakeholders who were involved in this intervention had influence on the implementation of the intervention.
	The stakeholders who were involved in this intervention had influence on the long-range planning for this intervention.
Relative Advantage	This intervention was better than other strategies that could have been implemented to address the same problems/issues.
	This intervention was an improvement over other substance use prevention interventions or initiatives that were already available for the community
	Key stakeholders were able to see evaluation results that showed this intervention benefitting the community.
	Evaluation results that showed success of the intervention were shared with the broader community.
Compatibility	This intervention fit well with other substance abuse prevention interventions implemented in the community.
	This intervention helped us meet the needs of our community.
	This intervention was timely given the needs of the community at the time.
	This intervention fit well with the overall culture and values of our community.

Complexity	The intervention was simple and easy to implement.
	There were so many components to this intervention that it was hard to understand all the pieces.
	Putting this intervention into place was difficult because of its complexity.
Triability	Those involved in implementing this intervention saw small changes along the way that showed that the intervention was working.
	Those involved in implementing this intervention regularly set small goals to help keep their momentum going.
	Those involved in implementing this intervention celebrated successes of the intervention often.
	Those involved in implementing this intervention regularly made minor adjustments to the intervention to improve its success.
Priority	This intervention was one of the top three priorities of the organization that led its implementation.
	Members of the organization that led the intervention's implementation emphasized that the intervention was very important for improving the health of the organization.
	Members of the organization that led the intervention's implementation were aware of how important the intervention was for the community at the time.