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Examining the Effects of a Comprehensive Community Intervention on Underage Drinking in Seven Kansas Communities

By

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Submitted to the graduate degree program in Applied Behavioral Science and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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Examining the Effects of a Comprehensive Community Intervention on Underage Drinking in Seven Kansas Communities

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Abstract

In the United States, underage drinking, or alcohol consumption by individuals younger than 21 years, is the most common type of substance abused by youth. Underage drinking is associated with violent and risky sexual behaviors, and is a major predictor of later alcohol abuse in adulthood. A number of antecedents are associated with underage drinking including social norms, social access, and enforcement of alcohol policies. The Strategic Prevention Framework (SPF) is a model developed by the Substance Abuse and Mental Health Services Administration to guide communities in addressing substance abuse through effective prevention efforts. While most states in the nation have received funding to implement the framework, there are few published studies that exist examining the effects of SPF implementation on underage drinking outcomes. The two studies presented in the dissertation used a mixed-methods approach to examine the effects of a comprehensive community intervention on underage drinking outcomes in seven Kansas communities implementing the SPF model. The second study further examines the association between the level of intensity, or dose, of the comprehensive community change interventions (i.e., program, policy, practice changes) across the seven communities and improvements in underage drinking outcomes over time. The results show a 34.3% reduction in past 30-day self-reported alcohol consumption among youth between 2006 and 2012. Additionally, a strong and statistically significant correlation existed between the intensity of community change interventions and underage drinking outcomes. The study provides empirical support for the Strategic Prevention Framework as an effective approach for implementing comprehensive interventions to reduce and prevent underage drinking in communities.

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Examining the Effects of a Comprehensive Community Intervention on Underage Drinking in Seven Kansas Communities

Underage drinking, defined as alcohol consumption by individuals younger than 21 years of age, is a serious public health concern. Recent estimates indicate that alcohol is the most commonly abused substance among youth, often serving as a gateway drug (Centers for Disease Control and Prevention, 2012). Findings from the 2011 Youth Risk Behavior Survey reveal that almost 40% of youth reported alcohol consumption at least once in their lives, and more than 20% reported binge drinking at least once (Centers for Disease Control and Prevention, 2011; Eaton et al., 2012). Likewise, data from the Monitoring the Future survey indicate that while more than 10% of 8th graders have engaged in alcohol consumption in a past 30-day period, the prevalence increased to 40% among 12th graders (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2014; Monitoring the Future, 2013).

Over the past 20 years, studies have consistently shown that certain risk factors exist that may place youth who engage in underage drinking at an increased risk for other health-hazardous behaviors. Particularly, underage drinking has been associated with risky sexual behavior (Miller, Naimi, Brewer, & Jones, 2007), contracting sexually transmitted infections (Shafer et al., 1993), elevated risk of using illicit drugs (Kirby & Barry, 2012), and involvement in violence (Blitstein, Murray, Lytle, Birnbaum, & Perry, 2005; Kodjo, Auinger, & Ryan, 2004; Swahn, Simon, Hammig, & Guerrero, 2004). On a broader scale, underage drinking has a significant economic cost. Recent estimates indicate that youth alcohol consumption in the United States accounts for as much as $27 billion in the country's economic burden, of which 10% is a result of alcohol-related hospitalizations among youth (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011).

Conceptual Approaches for Adolescent Substance Abuse Prevention

Over the past 30 years, researchers have integrated a number of approaches from various disciplines to address alcohol and drug abuse. The literature in prevention science, public health, and community psychology have primarily focused on several key conceptual approaches, which have expanded on each other over time. However, the most prominent and widely adopted conceptual approach for examining adolescent drug and alcohol consumption is the social development model. The social development model uses an ecological perspective and provides the conceptual foundation from which later studies have examined causal relations between environmental stimuli and behavior.

Social development model. The social development model (Hawkins & Weis, 1985) is the primary approach that grounds community-based adolescent substance abuse prevention efforts. The model examines risk and protective factors across the individual, peer, family, school and community levels, which all influence the likelihood that youth will engage in problem behaviors (Figure1). For example, youth whose families model and allow alcohol consumption in the home are more likely to engage in underage drinking themselves. The social development model suggests that at each ecological level, youth who receive positive reinforcement, opportunities for involvement, and skills for improvement are more likely to demonstrate a sense of attachment that can yield changes in both beliefs and alcohol consumption across the behavioral ecology.

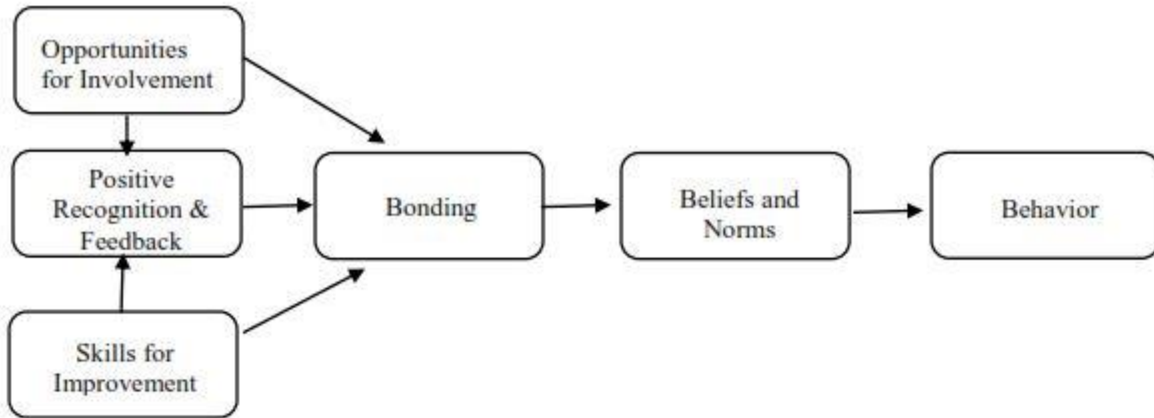

Figure 1. Social development model. From Duerden (2011). Theory-based programming: The social development model.

Ecological model. The social development model is based on the ecological model in that it examines risk and protective factors across multiple ecological levels. Each structure, both individually and collectively, describes the contingencies that are associated with the prevalence of problem behaviors. Comprehensive strategies that address complex behavior within and across ecological systems allow for an analysis of problem behaviors in the context of naturally occurring interlocking contingencies. Particularly, the ecological model suggests that supporting community-based interventions through multiple systems or parts of the environment in which individuals have the opportunity to engage in the behavior (e.g., individual, family, school, community) may be an appropriate approach for addressing problems of social significance (Vimpani, 2005).

Risk and protective factors. Risk and protective factors serve as antecedents that may influence the propensity of youth to engage in alcohol consumption. Risk factors are environmental conditions that make one more susceptible to engaging in problem behavior, whereas protective factors are stimuli that mediate or moderate the effects of risk exposure. In their seminal paper, Hawkins, Catalano, and Miller (1992) identified a number of risk factors of

substance abuse, stratified across two classes: societal and cultural, and individual and interpersonal (Table 1). Within the social development model, strategies can often address risk factors of underage drinking by enhancing protective factors such as family bonding, high academic achievement, and stronger enforcement of underage drinking laws.

Table 1

Risk Factors across Social Ecological Domains

Individual & Interpersonal	Societal & Cultural
Physiological Factors	Social Norms
Family Involvement and Functioning	Availability of Alcohol
Academic Failure	Extreme Economic Deprivation
Association with Drug Using Peers	Neighborhood Disorganization

In the context of community interventions, the social development model supports the use of additional protective factors such as mobilization of community sectors, which may enhance the implementation and sustainability of the approach over time (Hawkins et al., 1992). By serving as protective factors, the model's components can support changes in both individual and community-levels to modify alcohol consumption across the behavioral ecology.

Personal factors of underage drinking. Underage drinking has a significant detrimental effect on adolescent development. Previous studies have described the neurological development of adolescent brains, finding that the amount of gray matter increases through the pubescent years, which is also the period associated with improved cognitive development from early childhood (Giedd et al., 1999; Gogtay et al., 2004; Sowell et al., 2004). However, studies have shown that alcohol consumption is correlated with structural abnormalities in the adolescent brain. Such abnormalities are particularly noted in the prefrontal cortex, which is associated with

reasoning and impulse control (Medina et al., 2008). The damaging effects of alcohol on the prefrontal cortex may be related to prior findings indicating that youth who use alcohol perform worse on memory tests and have diminished capacities to plan (Bonnie & O'Connell, 2004).

Family and community risk factors. Not only does alcohol consumption affect adolescent neural development, but its prevalence is also influenced by family and community-level risk factors. Poor family involvement, for example, has been shown to be a factor related to alcohol consumption among youth (Hawkins, Catalano, & Miller, 1992). Some research suggests that addressing familial dynamics may yield improvements in underage drinking outcomes (Harachi, Ayers, Hawkins, Catalano, & Cushing, 1996; Hernandez & Lucero, 1996; Litrownik et al., 2000). Alcohol availability is another antecedent that serves as a discriminative stimulus for adolescent alcohol consumption. Previous research suggests that high school students gain access to alcohol from peers, parents, and other adults (Mayer, Forster, Murray, & Wagennar, 1998); specifically, twelfth graders were more likely to gain access to alcohol and drink in someone else's home, while ninth graders were more likely to access alcohol from their own parents. Other studies suggest that underage drinking occurs and is maintained in part by behavioral modeling and socially-mediated positive reinforcement (Brook, Whiteman, Gordon, & Brook, 1990; Needle et al., 1986). Specifically, young boys were more likely to consume alcohol if their older brothers modeled the behavior or provided social approval.

Strategic Prevention Framework. Based on the social development model. the Strategic Prevention Framework (SPF) is a five-phase model that supports substance abuse prevention efforts by diagnosing and addressing risk and protective factors related to the problem behavior (Eddy et al., 2012; Imm et al., 2007; Substance Abuse and Mental Health Services Administration, 2011). The processes of the SPF include assessment, capacity, planning,

implementation, and evaluation (Figure 2). These processes work in concert to promote cultural competency of evidence-based strategies and sustainability of community-based prevention efforts. Because these phases are iterative and interactive (e.g., community organizations continually engage in capacity building efforts across all phases), the SPF provides a conceptual foundation for developing and implementing evidence-based prevention strategies.

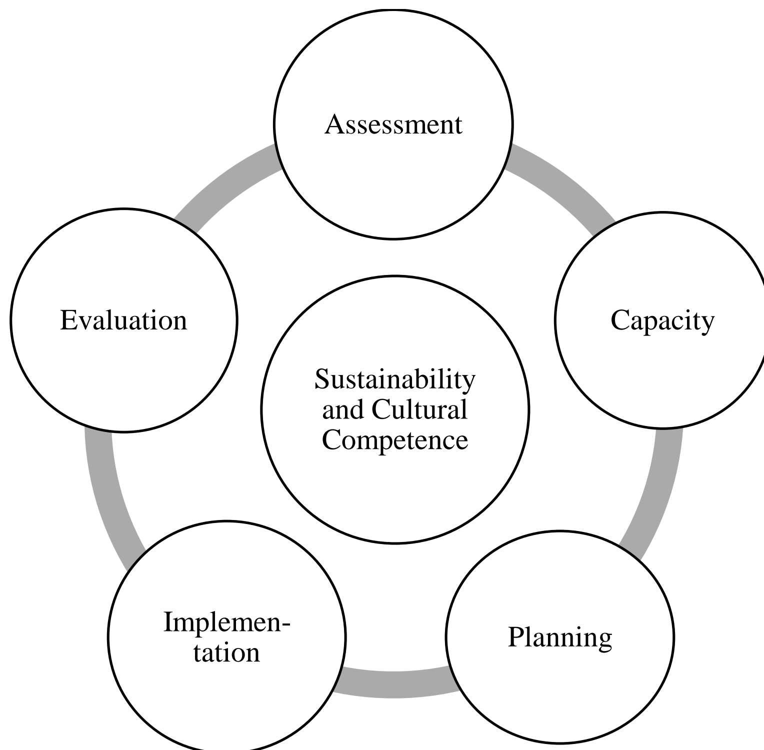

Figure 2. Strategic Prevention Framework

Background of the Strategic Prevention Framework. In the late 1990s, SAMHSA's Centers for Substance use Prevention (CSAP) begin funding community coalitions to support local prevention efforts through State Incentive Grants (SIGs) or State Incentive Cooperative Agreements (SICAs). The SICA was used by CSAP to support states' implementation of a multi-phase process to address adolescent substance abuse. The steps included: assessing needs and resources, prioritizing needs, identifying gaps between needs and resources, and implementation

of evidence-based programs and best practices to support efforts to reduce the prevalence of adolescent substance use in communities. While SICA offered a community-based approach to address substance abuse at the community and state levels, it was not without its limitations. Primarily, SICA focused on examining the risk and protective factors of substance abuse, but did not prioritize population-level changes as behavioral outcomes of interest (e.g., past 30 day use). Because of its concentration on risk and protective factors, the SICA focused almost predominantly on supporting individual-level change through direct prevention programs. Furthermore, the SICA did not address sustainability of coalition efforts, as implemented programs often conclude when funding for such strategies has ended.

By the early 2000s, SAMHSA developed the Strategic Prevention Framework and provided support for coalitions under the Strategic Prevention Framework State Incentive Grant (SPF-SIG). The SPF, while similar to the SICA, improved on some of the limitations of the prior approach. First, the SPF was more directed toward identifying and addressing behavioral outcomes. In the SPF process, risk and protective factors are identified only after the behavioral outcomes have been defined. In addition, there is a clear focus on not only programs, but also environmental changes, including policy, and practice changes. The enhancements to the approach is integrated into each phase of the SPF model. To date, approximately 49 states have received funding through the SPF-SIG initiative. One key aspect of the SPF is that it promotes the use of community coalitions to support implementation of evidence-based strategies as a mechanism for facilitating change and improvements in prioritized substance abuse related outcomes.

Implementation of the Strategic Prevention Framework. The Strategic Prevention Framework integrates elements of the social development model by identifying and addressing

risk and protective factors across multiple ecological levels and domains reduce and prevent adolescent substance use. From the few published studies on SPF, the literature suggests that supporting SPF implementation efforts can yield improvements in outcomes related to reductions in adolescent substance use. In a cross-site evaluation of the SPF, Florin and colleagues (2012) found that as part of a comprehensive community intervention, policy, media, and enforcement related efforts were moderately correlated to their respective outcomes.

Another study investigated the implementation of the SPF in Eau Claire, Wisconsin and found that implementation of the SPF yielded decreases in students' self-reports of past 30-day use, ease of obtaining alcohol, and binge drinking over time (Eddy et al., 2012). Additionally, there was a 12% increase in the number of students reporting parental disapproval to underage drinking, relative to baseline measures. Although the implementation of SPF in Eau Claire, Wisconsin showed improved outcomes in self-reported 30-day use, similar findings in other communities have not been published in peer-reviewed literature. Rather, a number of studies have been published on enhancing coalition capacity and infrastructure to support SPF implementation (Anderson-Carpenter, Watson-Thompson, Jones, & Chaney, 2014; Florin et al., 2012; Orwin, Stein-Seroussi, Edwards, Landy, & Flewelling, 2014; Piper, Stein-Seroussi, Flewelling, Orwin, & Buchanan, 2012).

Implementation of Comprehensive Community Interventions

Within the past couple of decades, comprehensive community interventions have become a commonly promoted approach used in prevention research to address community-level problems such as violence, obesity and underage drinking. Comprehensive community interventions, characterized by the engagement of multiple community sectors at different socioecological levels, address multiple and interrelated complex behaviors within and across

ecological systems by implementing multiple components and strategie to address various ecological aspects that may contribut to the problem behavior. Comprehensive community interventions permit addressing problem behaviors in the context of naturally occurring interlocking contingencies. In addition, it has been suggested that comprehensive approaches may be more beneficial at reducing alcohol consumption than single program interventions targeting only individual-level behavior change (e.g., alcohol education programs) (Paek & Hove, 2012).

Comprehensive approaches address both risk and protective factors of problem behaviors across multiple settings, community sectors, and prevention strategies. Comprehensive community-based interventions use multiple strategies or intervention components to address problem behaviors such as underage drinking through the coordinatd implementation of new programs, policies, and community practices. (Hanlon, Bateman, Simon, O'Grady, & Carswell, 2002; Litrownik et al., 2000; Schelleman-Offermans, Knibbe, Kuntsche, & Casswell, 2012; Stafström & Östergren, 2008; Stevens, Mott, & Youells, 1996). The literature suggests that implementing interventions that target multiple systems of influence is useful in addressing alcohol abuse (Giesbrecht & Greenfield, 2003; Paek & Hove, 2012; Vimpani, 2005; Williams et al., 2006). Comprehensive community interventions also promote the engagement of multiple stakeholders across ecological levels, which may support the implementation and sustainability of environmental changes necessary to produce and maintain reduce and prevent alcohol consumption over time (Williams et al., 2006).

Several types of community-based interventions have been used to reduce alcohol consumption among youth, including school-based alcohol education programs, adopting laws and regulations, and implementing environmental strategies (Giesbrecht & Greenfield, 2003).

Comprehensive approaches that support both antecedent (e.g., reducing access to alcohol) and consequent (e.g., increased fines for selling alcohol to minors) interventions across ecological levels may be more effective at reducing alcohol than interventions targeting behavior change solely at one level (Paek & Hove, 2012). Equally important, interventions that include multiple stakeholders across ecological levels may support the implementation and sustainability of behavioral changes to reduce and prevent alcohol consumption (Williams et al., 2006). In a case example, Harachi and colleagues (1996) described how the Salem-Keizer TOGETHER! Board collaborated with a number of community sectors to aid individuals residing in low-income housing areas to access community resources. This collaboration allowed the Board to address extreme economic deprivation, which is a noted risk factor of alcohol abuse (see Hawkins, Catalano, & Miller, 1992). The Salem-Keizer TOGETHER! Board also modified barriers to financial and informational resources by providing mini-grants to family resource providers and establishing an interfaith network for substance abuse prevention.

The United States Department of Health and Human Services (DHHS) recognizes the importance of comprehensive community interventions in reducing underage drinking. The DHHS, through its Healthy People 2020 initiative, identified six primary objectives related to reducing the prevalence of underage drinking; four of the six objectives specifically target program and environmental strategies, including policy changes (Department of Health and Human Services, 2013). To support the Healthy People 2020 objectives, there are a number of underage drinking prevention strategies that address both antecedents and consequences of the problem behavior. Recommended efforts include installing ignition interlocks on vehicle dashboards to measure drivers' blood alcohol concentration (Elder et al., 2011), increasing alcohol beverage taxes (Elder et al., 2010), and limiting the days and hours during which alcohol

can be sold (Middleton et al., 2010). The Guide to Community Preventive Services provides recommendations for reducing underage drinking, including enhancing enforcement of alcohol sales laws and strengthening current minimum legal drinking age policies. The recommendations and strategies supported by the Guide to Community Preventive services and Healthy People 2020 highlight the more widespread adoption of comprehensive community interventions to address underage drinking in research and practice.

Capacity Building Efforts in Addressing Underage Drinking

In the past two decades, prevention scientists and practitioners have acknowledged the importance of coalition capacity to effectively address problems and goals of social significance. Capacity building may be defined as the process of enhancing a coalition's collective skills, capability, and resources to occasion community-level changes over time and across contexts to address a prioritized problem or goal (Watson-Thompson, Woods, Schober, & Schultz, 2013). Coalition capacity is an important process in supporting community-based interventions; while new programs, policies, and practices change the environment in which underage drinking occurs, improvements in capacity may serve as an indicator of how well coalitions are equipped to facilitate changes in the environment to address target behaviors (Zakocs & Edwards, 2006).

Multisectoral engagement in alcohol abuse prevention interventions. Prevention researchers and practitioners recognize the importance of multisectoral engagement in implementing community interventions. A number of studies have engaged multiple sectors in implementing community-based interventions related to alcohol consumption. Prevention interventions often include youth, parents, and schools (Collins, Johnson, & Becker, 2007; Hanlon et al., 2002; Stevens et al., 1996), while other studies have engaged the judicial system, businesses, and volunteer organizations (Bagnardi et al., 2011; Harachi et al., 1996). Although

case examples provide some support that multisectoral engagement can occasion widespread behavior change and improved targeted outcomes, there is still limited empirical evidence regarding its effects on reducing alcohol consumption outcomes, particularly among youth.

Many comprehensive community interventions use a coalition approach to engage multiple sectors in prevention efforts. The literature cites additional dimensions that support enhanced coalition capacity, including skills and resources, participation and leadership, and social and organizational networks (Goodman, Wandersman, Chinman, Imm, & Morrissey, 1996). Such dimensions are often delivered through training and technical assistance, and have been shown to enhance coalition functioning and implementation of evidence-based strategies (Brown, Feinberg, & Greenberg, 2010; Riggs, Nakawatase, & Pentz, 2008; Wandersman et al., 2008). Other research posits that sharing funding with other agencies and improved infrastructure are associated with higher levels of coalition capacity to support and maintain the implementation of evidence-based prevention strategies at the local level (Jasuja et al., 2005). A systematic review revealed that the most common conditions that support capacity building included strong leadership, clear governing procedures, active participation, diverse membership, and multisectoral engagement (Zakocs & Edwards, 2006). Given the research on coalition functioning, the literature suggests that building capacity can support enhanced implementation of prevention interventions.

Measuring Outcomes in Community-Based Prevention Efforts

Measuring dependent variables. Studies in prevention research use a variety of measures to examine improvement in substance abuse related outcomes and associated risk factors. Many studies in the prevention literature have demonstrated the importance of community-based interventions to reduce alcohol consumption in youth (Hanlon et al., 2002;

Schelleman-Offermans et al., 2012; Schinke, Tepavac, & Cole, 2000). While comprehensive community interventions in other areas of public health generally use a range of dependent measures, much of the prevention research, particularly in the United States, heavily relies on self-reported measures of behavior change. Although some studies also use permanent products and other collateral measures to validate self-reported data (Collins et al., 2007; Cubbins, Kasprzyk, Montano, Jordan, & Woelk, 2012; Schinke et al., 2000).

One study (van de Luitgaarden, Knibbe, & Wiers, 2010) used only self-reports to examine the effects of behavioral contracts with retailers on changes in adolescent alcohol consumption. The findings showed that not only were there no significant reductions in alcohol consumption, but also there were increases in consumption. A more recent study used community popular opinion leaders (CPOLs) to communicate the benefits of reducing excessive alcohol consumption through informal conversations with influential community members (Cubbins et al., 2012). The authors found the intervention to be ineffective overall in reducing alcohol consumption among adults in rural Zimbabwe. Although the Cubbins et al. study used biochemical samples as a supplemental dependent measure, its overall measurement of alcohol consumption was based on the number of pints ingested or the amount of *kachasu*, a strong local alcoholic beverage, which was consumed. Findings from the van de Luitgaarden et al. (2010) and the Cubbins et al. (2012) studies suggest that using clearly defined dependent measures with corroborating data for self-reported behavior may be more accurate in measuring changes in alcohol consumption.

Measuring the intensity of community-based interventions. A number of studies have noted the importance of better understanding implementation dose or intensity of community-based interventions. Studies have used multiple methods and dimensions to analyze the

relationship between intervention intensity, effects and behavioral outcomes. Abrams and colleagues (1996) posited that intensity can be conceptualized as the multiplicative effect of reach and efficacy. Later research expanded on Abrams' work by including adoption, implementation, and maintenance measures to characterize the effects of public health related interventions in broader settings (Glasgow, Vogt, & Boles, 1999).

Other, more recent studies have described alternative approaches to measuring the intensity and effectiveness of community-based prevention interventions. Cheadle et al. (2010) used a logic model approach, which allowed for measurement of both environmental changes and, more distally, indicators of behavioral outcomes related to community-based obesity prevention efforts. In another health initiative, program implementation was assigned an intensity value based on the degree to which direct services were used (Cheadle et al., 2011). More direct services such as case management and coordination, and one-day programs with a substantial time commitment were rated with a greater intensity than single-session interventions with limited contact hours. In a different approach to measuring intensity, Collie-Akers and colleagues (2013) proposed a methodology based on scoring implemented environmental changes based on their duration, type of behavior change strategy, and potential reach of the target population. While the literature identifies various methods of measuring the association between intervention intensity and environmental change, there have been no published studies examining the association with respect to substance abuse-related outcomes, such as underage drinking.

Limitations in Alcohol Consumption Research

While the current literature elucidates the value of multicomponent prevention interventions in community-based settings, there are some key limitations that need to be

addressed. First, many empirical studies do not use multiple measures of dependent variables. While self-reports are widely used in the scientific literature and may be appropriate for examining rates of alcohol consumption at the population level, the risk for recall bias and reactive measurement may be better balanced by corroborating self-reported data with permanent products (e.g., alcohol sales receipts, biochemical samples) or population-level indicators (e.g., law enforcement citation reports, written policies).

Second, while the literature describes the process measures used in SPF implementation (Florin et al., 2012; Piper et al., 2012), there have been few published studies examining its effects on changes in behavioral outcomes related to substance use. One explanation for the small number of studies that examine behavioral outcomes is that the SPF is still being implemented in several states from which process measures are the only available data. That being said, the current lack of published research on the effects of SPF implementation on substance abuse related outcomes provides a challenge in demonstrating the model's effects on reducing the prevalence of substance abuse at the community level.

Third, although research has demonstrated the utility of comprehensive community-based interventions in addressing problems of social significance, the literature does not provide a standard methodology for examining the contributions of the multiple components of comprehensive community interventions. More specifically, there are few published empirical studies that measures the associations between implemented comprehensive community interventions and substance abuse related outcomes. To date, the published research on measuring intensity have been in the context of preventing cardiovascular disease, diabetes, and obesity. In addition, little empirical research to date has examined the association between the intensity of implemented intervention components and behavioral outcomes (e.g., reductions in

underage drinking rates). Rather, the current literature on intervention intensity and impact focus more on intermediate outcomes, such as new programs, policies, and community practices (Cheadle et al., 2013; Cheadle et al., 2010; Collie-Akers et al., 2013; Glasgow et al., 1999). While the literature elucidates various methods of examining the intensity of comprehensive community-based interventions, there are still limited empirical exemplars of methodological approaches for measuring the overall relationship between implementation intensity and behavioral outcomes for comprehensive community interventions, particularly in prevention research. Thus, it is often difficult to determine the cumulative impact of prevention interventions, including local, state, and federally funded underage drinking initiatives.

Purpose and Significance of the Study

The present research examines the effects of using the Strategic Prevention Framework to support implementation of comprehensive community interventions (SPF) t to prevent and reduce alcohol consumption by youth. The first study examines the implementation of the Kansas Strategic Prevention Framework State Incentive Grant (SPF-SIG), a five-year grant awarded by the Substance use and Mental Health Services Administration (SAMHSA) to the Kansas Social and Rehabilitation Services, to reduce underage drinking in Kansas. The funding period for the KS SPF-SIG was January 2007 to June 2012. The study analyzed the implementation of SPF by prevention coalitions in seven Kansas communities through the following research questions (see Table 2):

1. Did the SPF enhance the capacity of community coalitions to support local prevention efforts?
2. How did prevention coalitions implement and sustain prevention activities in the community using the SPF?

3. Was the implementation of prevention interventions through SPF associated with improvements in underage drinking outcomes?

Based on the findings from the first study, the second study examined the amount and kind of community change strategies (i.e., programs, policies, and practices) that were facilitated in the study communities to address underage drinking. Specifically, the second study examined the following research question: Are there associations between rates and intensity of community changes and underage drinking related outcomes in the study communities?

Consistent with the prevention literature, the present research examines the use of risk and protective (i.e., influencing and contributing) factors related to underage drinking. This study uses multiple measures to examine implementation of different components of the comprehensive community prevention interventions. The present research also uses mixed methods (i.e., quantitative and qualitative analyses) to examine both the amount of behavior change over time and the conditions in which behavior change occurred. Finally, the findings enhance further understanding of both intervention dose and sustainability of community-based prevention interventions.

Study 1 Method: Examining Coalition Efforts to Occasion Community Changes Using the Strategic Prevention Framework

Background and Study Context

The Kansas Strategic Prevention Framework State Incentive Grant (SPF-SIG) supported the implementation of evidence-based strategies by community coalitions to reduce the prevalence of underage drinking related outcomes. The overall goals of the Kansas SPF-SIG initiative included: (a) building capacity to implement and sustain evidence-based strategies; (b) preventing the onset and prevalence of substance abuse; (c) reducing the prevalence of

associated consequences of substance abuse; (d) supporting sustainability efforts to enhance implementation of programs, policies, and practices within SPF; and (e) integrating data across SPF phases to support decision making (SPF Kansas, 2012). The dissertation study was part of a broader study approved by The University of Kansas Human Subjects Committee (see Appendix A).

Participating Coalitions and Communities

Seven coalitions in Kansas communities that were funded through the Kansas SPF-SIG participated in the study (Figure 3). To be included in the present study, intervention communities had to meet the following criteria: (a) must have been funded as a Kansas SPF sub-grantee between 2008 and 2012; (b) must have an active county coalition addressing adolescent substance abuse prevention; (c) must demonstrate readiness to support the Strategic Prevention Framework phases, as identified in the SPF Application prioritization criteria (Appendix B); and (d) must have available 2007 and 2012 data from multiple sources including: (1) Kansas Communities That Care survey data, (2) retailer citations for selling alcohol to minors, (3) motor vehicle crashes resulting in deaths, and (4) motor vehicle crashes resulting in injuries.

Intervention communities. The seven intervention communities were geographically distributed across Kansas, consisting of both urban and rural communities. Across the intervention communities, more than one out of four residents ($M = 25.8\%$, $SD = 3.0$) were younger than 18 years old. The communities consisted of diverse populations that were representative of the overall state.

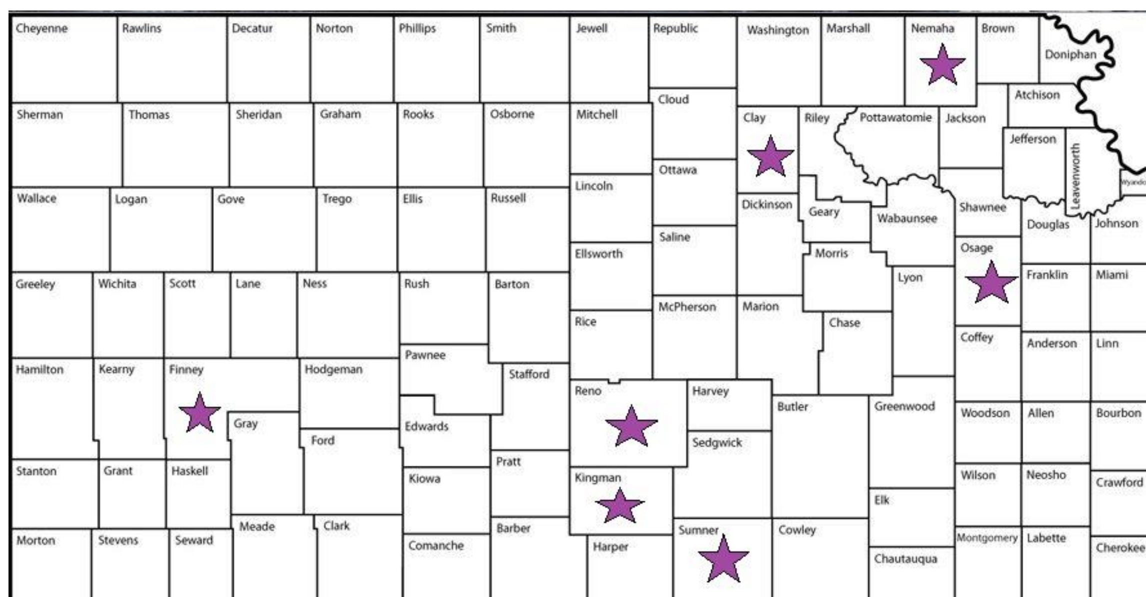

Figure 3. Distribution of participating Kansas SPF-SIG communities

Table 2 describes the intervention communities, youth population, and representative coalition for the respective intervention communities. The intervention coalitions supported community-based prevention interventions related to reducing the prevalence of underage drinking. Coalition volunteers included representatives from multiple sectors, including business, local government, families, media, law enforcement, and schools. Particularly, the coalitions sought to implement programs, policies, and practices that support widespread behavior change and improvement in targeted outcomes.

State prevention system partners. The partnering prevention coalitions in the SPF intervention communities participated in training and technical assistance provided by the state prevention team. The state prevention team included the Kansas SPF-SIG director through the Department of Social and Rehabilitation Services, state-based technical assistance trainers funded through the grant, and a team of evaluators for the initiative.

Table 2

Description of Participating Intervention Communities

SPF Coalition Characteristics		2010 Population Characteristics				
SPF Community Prevention Coalition	Year Established	Total Population	Youth Population (% Total Population)	White (% Total Population)	African American (% Total Population)	Hispanic (% Total Population)
Clay Counts Coalition	2006	8,531	23.5	91.9	1.1	4.4
Community Health Coalition of Finney County	2000	37,200	31.9	44.9	2.9	47.7
Kingman County Substance Abuse Prevention Group	2000	7,863	23.7	94.5	0.2	2.7
United 4 Youth of Nemaha County	2007	10,132	25.6	95.9	0.6	1.5
Drug Free Osage County	2002	16,142	24.3	94.7	0.4	2.3
Reno County Communities That Care Coalition	2003	64,438	23.4	85.6	3.2	8.5
Sumner County Community Drug Action Team	2005	23,674	25.4	90.9	1.1	5.0
Aggregate SPF	--	415,856	25.3	76.6	5.0	14.7
Total Kansas	--	2,885,905	25.1	77.5	6.2	11.0

Note. Sumner County Community Drug Action Team was established in 2005 as the Community Drug Action Team. Its current name was adopted in 2008 under the guidance of the Kansas SPF-SIG. Drug Free Osage County was established in 2002 as the Osage County Interagency Coordinating Council. Its current name was adopted in 2007 under the guidance of the Kansas SPF-SIG.

The SPF-SIG evaluation team, which was part of the state prevention team, consisted of partners from the Learning Tree Institute at Greenbush and The University of Kansas Work Group for Community Health and Development. The Learning Tree Institute coordinated the collection and analysis of community-level outcome data including the Kansas Communities that Care Survey

data. The KU Work Group supported online documentation and data management to examine implementation of the evidence-based prevention strategies.

Comparison group communities. Comparison group communities were matched with intervention communities to examine the effect of the intervention on underage drinking outcomes. To examine underage drinking outcomes using the Kansas Communities That Care (KCTC) Survey, a school-based survey, comparisons were matched at the school district level. Additionally, comparison communities were matched at the county level to analyze comparison data for motor vehicle injuries and fatalities related to underage drinking.

School district-level comparison communities. To examine comparisons for past 30-day use and binge drinking outcomes, the community comparison matching process occurred at the school district level. District level matching allowed for a greater likelihood of obtaining an appropriate comparison sample pool of youth respondents who were as similar to the youth in the intervention group as possible. In addition, matching communities at the school district level minimized variability in rates of underage drinking outcomes at the county level, as well as assured sensitivity to the KCTC Survey. In the event that an intervention school district could not be matched to a single comparison group district, a cluster of comparison school districts were used to match the intervention group school districts based on the student population characteristics. When clustered comparison districts were used, the data were aggregated and analyzed across school districts in the cluster group.

School districts were excluded if less than 55% of the students in grades 6, 8, 10, and 12 participated in the Kansas Communities That Care (KCTC) Survey in 2007. Of the eligible school districts, comparison communities were matched according to the following variables: (a) the 2007 KCTC Survey student reported 30-day alcohol consumption rate, (b) the 2007 KCTC

Survey participation sample size, (c) the 2007 KCTC Survey student reported binge drinking rate, (d) the 2007 percentage of KCTC Survey participants who identified as White not Hispanic/Latino, (e) the 2007 percentage of KCTC Survey participants who identified as Hispanic/Latino, (f) the 2007 percentage of students in the school district receiving free or reduced lunch, and (g) the geographical size and designation of the community, as identified by the Kansas Department of Health and Environment. Table 3 shows the characteristics of the intervention and matched comparison communities.

Table 3

Characteristics of Intervention and Matched Comparison Communities

Community Characteristic	Intervention Communities (*N*)	Comparison Communities (*N*)
Geographic Designation		
% Urban	25 (5)	23 (8)
% Rural	75 (15)	77 (27)
Student Sample Size from KCTC	14,156	14,320
% Past 30-Day Use (KCTC Average)	32 (4,630)	32 (4,603)
% Free/Reduced Lunch (KDHE Average)	18 (2,545)	18 (2,556)
% White, Not Hispanic/Latino (KCTC Average)	82 (11,607)	84 (12,029)
% Hispanic/Latino (KCTC Average)	8 (1,132)	8 (1,146)

Note. KCTC = Kansas Communities That Care Survey. KDHE = Kansas Department of Health and Environment.

County-level comparison communities. Analyses of objective outcome measures (i.e., alcohol-related motor vehicle injuries and fatalities) included intervention communities matched to comparison communities at the county level. County-level comparisons were selected based on the following criteria: (a) United States 2010 Census population data, (b) county designation (i.e., urban, rural, frontier) as identified by the Kansas Department of Health and Environment,

(c) reported 2007 and 2012 data for motor vehicle injuries related to underage drinking, and (d) reported 2007 and 2012 data for motor vehicle fatalities related to underage drinking.

Table 4

Study 1 Description of Dissertation Research Questions and Related Measures

Dissertation Research Question	Independent Variable and Measures	Dependent Measures
(1) Did the SPF enhance the capacity of community coalitions to support local prevention efforts?	Development Activities by Type at the State and Community Levels Kansas SPF-SIG Collaboration and Capacity Survey	Tri-Ethnic Survey of Community Readiness
(2) How did local coalitions implement and sustain prevention activities in the community using the SPF?	Level of Action Plan Completion to Support Evidence-Based Strategy Implementation (ODSS)	Number and Types of Community Activities, including Community Changes, Services Provided, and Media Sustainability of Community Changes
(3) Was the implementation of prevention interventions through KS SPF-SIG associated with improvements in underage drinking outcomes?	Number and Types of Community Changes (ODSS)	**Primary Measures:** Past 30-day Use (Kansas CTC Survey. “On how many occasions (if any) have you had beer, wine, or hard liquor in the past 30 days?”) Influencing Factors Of Underage Drinking (Kansas CTC Survey data related to Social Norms, Social Access, and Enforcement) **Secondary Measure:** Alcohol-Related Motor Vehicle Injuries. Number of annual motor vehicle injuries related to underage drinking, 2007 – 2012 (Source: KDOT)

Note. ODSS = Online Documentation and Support System. CTC = Communities That Care. KDOT = Kansas Department of Transportation.

Research Questions and Designs

This quasi-experimental study examined the degree to which coalition efforts supported the implementation of prevention activities to occasion change in both the community (environment) and underage drinking outcomes (behavior). For this study, he three research questions and related measures are summarized in Table 4 above. A pretest-posttest design was used to address research questions 1 and 2. Research question 3 used an interrupted time series with multiple replications design, with a matched comparison group.

Intervention Components and Elements Using the SPF

The intervention consisted of five components: assessment, capacity, planning, implementation, and evaluation. Within and across each component, community coalitions received training and technical support from the state-level prevention system. Table 5 describes the specific components, elements, modes of delivery, and illustrative permanent products related to the SPF intervention in Kansas.

Training and technical support for SPF implementation. In the SPF intervention communities, coalitions participated in training and technical assistance provided by the state prevention team, consisting of the Kansas SPF-SIG director, technical assistance trainers, and a team of evaluators for the initiative. To facilitate ongoing technical assistance, the community coalitions used web-based platforms to share their accomplishments, receive guided feedback on strategy implementation, identify challenges, and develop plans for addressing those challenges. Aggregately, the community coalitions participated in approximately 1,925 hours of direct training and technical support across 300 sessions from January 2009 to June 2012. Each intervention community participated in minimally one hour of monthly individualized technical

assistance calls with the SPF State prevention team to support action plan development, implementation, and evaluation of evidence-based strategies.

The SPF communities also received group-based and individualized training and technical support in evaluation. Between 2009 and 2012, the SPF communities participated annually in four evaluation technical support calls facilitated by the evaluation team partners. The evaluation technical assistance sessions provided a space for coalitions to enhance, discuss and receive feedback regarding the implementation of the intervention, and to regularly examine the contributions of the intervention on overall underage drinking outcomes.

Local implementation of SPF phases by community coalitions. Approximately two months prior to the implementation of each SPF phase, representatives from participating coalitions received training from the Kansas state prevention team in supporting the implementation of SPF intervention components. As part of the training component of the overall intervention, the state prevention team provided the partner coalitions with task analyses to guide the implementation of core components (Appendix C). For example, to implement the planning component of the intervention, the task analysis required partner coalitions to: (a) select evidence-based strategies (e.g., programs, policies, and practices) that address local influencing factors of underage drinking (based on the assessment); (b) identify the process for ensuring strategies correspond to targeted influencing factors; (c) describe specific milestones and timelines for implementing strategies; (d) demonstrate how proposed strategies are inclusive and culturally competent, and (e) identify how proposed program, policy, and practice changes will be sustained after the SPF funding period has concluded.

After receiving training from the state prevention team for each intervention component, the partner coalitions planned for and then implemented the SPF phases through the engagement

of local multisectoral partners. To evidence implementation and completion of each phase, the coalitions submitted products (e.g., community assessment, strategic and action plans) that were reviewed by the Kansas SPF-SIG state prevention team. The state prevention team provided the coalitions with feedback to shape the product that would then be used to guide the intervention communities' activities in implementing their approved evidence-based strategies. After receiving feedback, the partner coalitions submitted a permanent product (e.g., action plan, logic model) to the state prevention team for approval. To assure a systematic approval process, the state prevention team used scoring rubrics to examine the degree to which permanent products met the state and federally established SPF guidelines.

Assessment. After receiving training, participating coalitions conducted community-based assessments; the goal was to determine the level, scope, and prevalence of underage drinking in the local community. Each coalition used epidemiological data (e.g., prevalence of past 30-day use and prevalence of binge drinking among youth) to understand the scope of underage drinking at the community level. Each community coalition conducted an in-depth analysis of underage drinking to identify the antecedents and root causes and factors contributing to underage drinking locally (Altman, 1995). The community assessments centered around four themes related to underage drinking in the context of the SPF: (1) naming and defining the problem behavior; (2) investigating both how and where underage drinking occurred; (3) analyzing the root causes of the problem behavior; and (4) examining the factors influencing and contributing to the prevalence of underage drinking.

Capacity. The participating communities engaged in capacity-building efforts to enhance their readiness and build capacity to address underage drinking. In this phase, the participating coalitions engaged in cross-site collaboration and learning opportunities, including training and

technical support. The Kansas Social and Rehabilitation Services (SRS) encouraged sector representatives from the community coalitions to collaborate with community sectors as communities of practice to address underage drinking. Communities of practice included: (a) multisectoral collaboration within or across the intervention communities to address underage drinking; (b) collaboration with prevention practitioners within and/or across SPF communities implementing the same evidence-based strategy; and (c) collaboration with prevention practitioners from the same sector in different geographical communities. The goal of sector collaboration was to encourage co-learning and support, particularly regarding implementation of evidence-based prevention strategies to address underage drinking.

Planning. Based on the needs assessments, the communities developed logic models to assist in further analyzing and identifying appropriate interventions to address influencing and contributing factors (e.g., retailer access, social norms) of underage drinking at the local level. The logic models aided stakeholders in identifying influencing and contributing factors that contributed to the problem behavior based on a root cause ("but why" and "why here") analysis, which provided a context to process data from the needs assessment. Using backward-logic intervention mapping, the logic models specified the following: (a) the target behaviors that needed to change to address past 30-day alcohol consumption, (b) the influencing and contributing factors (e.g., social access) associated with the problem behaviors, and (c) the evidence-based strategies identified to be implemented in addressing the problem in the community. As part of the logic model process, each coalition identified evidence-based strategies to address prioritized influencing and contributing factors that may contribute to underage drinking locally.

Development of objectives. As part of the SPF, coalitions also developed strategic and action plans to support implementation of strategies addressing underage drinking. The coalitions

identified influencing or contributing factors for underage drinking to be prioritized in the local community. From there, the coalitions developed data-driven objective statements related to underage drinking (e.g., past 30-day use and binge drinking). Coalitions were required to develop objective statements that were specific, measurable, achievable, relevant to their mission, time-bound, and challenging (Fawcett, Grassmeyer, Schultz, Carson, & Francisco, 2008). One example of an outcome-level objective statement is as follows: By December 31, 2011, reduce the percentage of students in grades 6, 8, 10, and 12 who report consuming alcohol in the past 30 days by 8 percentage points from a baseline of 33.8% in 2007. An illustrative example of an objective statement addressing social access as an influencing factor is by December 31, 2011, decrease the percentage of youth in grades 6, 8, 10, and 12 who report usually getting their alcohol from social sources by 7 percentage points from a baseline of 14.7% in 2008.

Identifying strategies and developing action plans. Evidence-based prevention strategies to address targeted influencing (i.e., risk and protective) factors for underage drinking were identified by the coalitions and approved by the state prevention team. Evidence-based strategies were required to have empirical support in peer-reviewed literature or be recognized as a "best practice" by organizations that support prevention research (e.g., Centers for Disease Control and Prevention, Substance Abuse and Mental Health Services Administration).

After receiving approval for the objective statements, the coalitions developed detailed action plans to support strategy implementation. Specifically, the action plans identified specific community change strategies (i.e., new or modified programs, policies, and practices) that the coalition sought to facilitate as activities or steps necessary to support implementation efforts.

Each step in the action plan specified the activity to be conducted, the individual responsible for implementing the activity, and the date by which the activity should be completed.

Implementation. From January 2009 through June 2012, the coalitions implemented approved evidence-based prevention strategies using the action plans. Coalitions implemented both evidence-based programs and environmental strategies (i.e., policies and practices). Each community was required to implement minimally two evidence-based prevention strategies. During this phase, the coalitions actively engaged multiple community sectors to take action in supporting strategy implementation. Examples of multisectoral engagement to support strategy implementation include working with policy makers and judicial systems to increase the penalty for providing alcohol to youth; partnering with school districts to implement school-based programs aimed at teaching peer refusal skills; and, raising awareness among youth and parents regarding the dangers of underage drinking.

Evaluation. In 2007, the state prevention team worked closely with experts in the fields of public health and prevention science to develop a robust evaluation approach. Additionally, the evaluation team coordinated data collection and analysis to examine the evaluation questions, which guided the present study. From January 1, 2009 and June 30, 2012, the intervention communities participated in examining data through quarterly sensemaking sessions facilitated by either the KU Work Group or the Learning Tree Institute, during which coalitions participated in a guided interview and in-depth data analysis of either process or outcome data.

The evaluation technical support calls provided a space for communities to reflect on its progress in implementing action plans and bringing about community changes related to prioritized risk/protective factors. More specifically, the evaluation sensemaking calls focused on three primary questions: (a) What do the data show? (b) What do the data mean? and (c) What

are the implications for the coalition's efforts in further implementing the intervention components? The sessions also allowed communities to reflect on how their progress supported the overall SPF process particularly in regard to strategic planning, and how their implementation of evidence-based strategies supported improvements in prioritized underage drinking related outcomes.

Sustainability and cultural competence. As part of the grant funding requirements, coalitions identified evidence-based strategies that were culturally appropriate for the local community. The selected strategies were culturally appropriate for the community context, based on evidence from previous empirical studies demonstrating effectiveness, or were approved by the state team for adaptation. Through technical assistance coalitions further identified any necessary components that may need to be adapted for the cultural context. Coalitions also engaged in training and technical assistance activities to consider how to sustain the prevention efforts. In particular, the partner coalitions developed discrete steps to support the sustainability of their prevention strategies, which were integrated into the action plans.

Table 5

SPF Intervention Components and Implementation Elements

Intervention Component	Implementation Elements	Mode of Delivery	Permanent Products or Evidence of Implementation
Assessment	• Formation of Epidemiological Workgroup • Collaboration with SPF Advisory Council • Collection and analysis of epidemiological data • Development of problem statements • Identification of potential target areas • Assessment of readiness, external factors, and potential barriers • Assessment of organizational, fiscal, and leadership capacity • Assessment of cultural competence	• Kansas Department of Social and Rehabilitation Services (SRS) • Partner coalitions • Epidemiological Design Team • State Epidemiological Outcomes Workgroup (SEOW)	• Clear, concise, data-driven problem statements • Data sources for ongoing assessment • Gap analysis and community program inventory • Epidemiological workgroup report
Capacity	• Creation and continuation of partnerships • Introduction of training to promote readiness, cultural competence, leadership, and evaluation capacity • Meetings and workshops with key stakeholders, coalitions, and service providers	• Partner coalitions • Kansas SPF State prevention team • Key stakeholders and leaders	• Capacity surveys and reports • Partnership memorandums of agreement (MOA) • Directory of key stakeholders, leaders, and service providers
Planning	• Planning meetings and strategy development sessions • Logic model development • Strategic and action plan development • Selection of programs, policies, and practices • Identification of objectives and creation of evaluation plan	• Partner coalitions • Kansas SPF State prevention team	• Comprehensive strategic plans • Logic models • Action plans for each evidence-based strategy • Performance outcomes and measures
Implementation	• Implementation of strategic plan • Consultation and collaboration with evaluation team • Development and implementation of evaluation plan • Collection of process data	• Partner coalitions • Kansas SPF State prevention team	• Documentation of evidence-based strategy implementation • Quarterly progress reports
Evaluation	• Consultation and collaboration with evaluation team • Collection of required data • Review of effectiveness of programs, polices, and practices	• Kansas SPF Evaluation Team • Kansas SPF State prevention team • Partner Coalitions	• Evaluation reports and updates • Recommendations for quality improvement

Note. Adapted from *Strategic Prevention Framework Information Brief*. (2005). Carnevale Associates, LLC. http://www.carnevaleassociates.com

Dependent Variables

This study used a number of dependent variables to examine the degree to which coalition capacity was enhanced to support the implementation of community changes and improvements in underage drinking outcomes (see Table 3, above). The Tri-Ethnic Survey of Community Readiness was used to measure changes in community readiness (Research Question 1). To examine the implementation and sustainability of community activities, the number and types of community activities and sustainability of community changes were measured (Research Question 2). Improvement in underage drinking outcomes were measured using the Kansas Communities That Care Survey data for past 30-day alcohol consumption and influencing factors for underage drinking, as well as alcohol-related motor vehicle injuries and fatalities data from the Kansas Department of Transportation (Research Question 3). In the sections below, each dependent variable is presented in greater detail.

Enhancing capacity to support local implementation efforts. In the dissertation study, levels of coalition readiness were measured using the Tri-Ethnic Survey of Community Readiness. The literature defines community readiness as the "relative level of acceptance of a program, action or other form of decision-making activity that is locality-based" (Donnermeyer, Plested, Edwards, Oetting, & Littlethunder, 1997, p. 68). The Tri-Ethnic Survey of Community Readiness has been extensively used in a variety of prevention contexts to measure community readiness for change (Donnermeyer et al., 1997; Plested, Smitham, Jumper-Thurman, Oetting, & Edwards, 1999; Scherer, Ferreira-Pinto, Ramos, & Homedes, 2001). Moreover, the Community Readiness Survey has been psychometrically tested with moderate to high internal consistency ($.6 < \alpha < .7$) across most domains (Beebe, Harrison, Sharma, & Hedger, 2001).

For the present study, between four and six key informants from each of the intervention communities participated in the Tri-Ethnic Survey interviews in-person or via phone to assess the community's readiness for change. Key informants were defined as individuals within the community who were knowledgeable about the community in relation to underage drinking. The informants were not, however, required to hold leadership positions or be a key decision-maker within the community (e.g., school superintendent, mayor, city council member). The Tri-Ethnic Survey consisted of 36 questions administered in an interview format, with interviews lasting between 30 minutes and 60 minutes each.

After the completion of key informant interviews, two scorers from the respective community coalition independently reviewed each of the responses. Then, they categorized each response based on the appropriate community readiness dimension. In the study, baseline and intervention community readiness assessment scores were analyzed across six dimensions: (a) efforts (i.e., the extent to which programs, policies, and efforts address underage drinking); (b) community knowledge of efforts (i.e., the degree to which community members are knowledgeable of local efforts and their effectiveness; and whether all community segments have access to local efforts); (c) leadership (the extent to which community leaders and decision-makers support local efforts that address underage drinking); (d) community climate (i.e., the community's prevailing attitude toward underage drinking); (e) community knowledge of the issue (i.e., the extent to which community members are knowledgeable of the causes, consequences, and impact of underage drinking on the community); and (f) resources (i.e., the degree to which local resources are available to support efforts to address underage drinking).

For each dimension of community readiness, the data from the Tri-Ethnic Community Readiness Survey were used to examine differential levels in the degree to which communities

are ready to support community level changes to address a problem or goal (Tri-Ethnic Center for Prevention Research, 2014). Therefore, community and across the dimensions. Table 6 provides a brief description of the Tri-Ethnic Survey stages of readiness by which each dimension was rated. The table shows the name, characteristics, and Tri-Ethnic summary statements for each community readiness stage. The scorers rated each dimension on a scale from 1 (i.e., No Awareness) to 9 (i.e., Community Ownership), which reflected the current stage of community readiness for the particular dimension.

Operational definitions and scoring criteria for community activities. In the study, community change, services provided, and media efforts were used as measures of community activities that supported the implementation of the intervention. To measure community activities, the community coalition documenter recorded the coalitions' activities in the Online Documentation and Support System (ODSS). Community change was defined as new or modified programs, policies, or practices facilitated by the coalition and related to its mission and goals (Appendix D). An example of a community change is for the first time, the Alcohol Beverage Control, in collaboration with a partner coalition, hosted a training for liquor store retailers regarding proper procedures for checking identification. To be scored as a community change, the documented activity or event was required to meet the following criteria: (a) related to prevention goals and objectives (e.g., specifically addresses reducing underage drinking); (b) an instance of a new or modified program, policy, or practice that has already occurred (e.g., a policy is first adopted, a program is first implemented); and, (c) facilitated by coalition members or partners acting on behalf of the coalition.

Table 6

Tri-Ethnic Assessment of Community Readiness Ratings

Community Readiness Stage	Characteristics of Community Readiness Stage	Tri-Ethnic Illustrative Example Statement of Community Readiness Stage
No Awareness	• No knowledge of local efforts • Issue is not much of a concern • No resources available to address the issue	"Kids get drunk and stay drunk"
Denial/Resistance	• Issue not a community concern • Few have knowledge about the issue • Lack of support for using resources	"We can't—or shouldn't—do anything about it"
Vague Awareness	• No immediate motivation to act • Vague knowledge of the issue • Limited resources to address the issue	"Something should be done, but what? Maybe someone else will address this issue"
Preplanning	• Acknowledgement of issue as a concern • Acknowledgement that action is required • Some resources exist to further efforts	"This is important. What can—or should—we do?"
Preparation	• Active support of improving current efforts • Community has basic knowledge of issue • Some resources exist to further efforts	"We will meet with key stakeholders this week"
Initiation	• Community has basic knowledge of issue • Leadership plays a role in supporting efforts • Allocated resources to address the issue	"This is our responsibility. We are now starting to do something to address this issue."
Stabilization	• More than basic knowledge of the issue • Leadership actively involved in ensuring long-term viability • Considerable resources allocated for continued support	"We have taken responsibility"
Confirmation/Expansion	• Community has considerable knowledge of the issue and local efforts • Leadership plays a key role in expanding efforts • Most community members strongly support efforts	"How well are our current programs working and how can we make them better?"
Community Ownership	• Most community members have considerable knowledge of issue and efforts • Leadership continually reviews evaluation findings • Diversified resources are secured with ongoing support	"These efforts are an important part of the fabric of our community"

Note. Adapted from the *Community readiness for community change handbook* (Tri-Ethnic Center for Prevention Research, 2014)

Additional examples of a community change include the implementation of Life Skills Training in a new school (program change), increased penalties for hosting parties at which youth can access alcohol (policy change), and reducing vendor sales of alcohol in public activities such as a fair (practice change). Community changes were analyzed by both the frequency and type (i.e., program, policy, or practice) to examine how the coalition facilitated changes in the environment to contribute to improving underage drinking outcomes.

Services provided was defined as the delivery of information, training, material goods, or other activities by members of the initiative to people in the community. For example, services provided include Sumner County Community Drug Action Team implementing a session of the Lions Quest program in the Argonia School District for kindergarten and fifth-grade students. To be scored as a services provided, documented activities were required to meet the following objectives: (a) related to the intervention's goals and objectives; (b) have already occurred and/or are ongoing events; (c) consist of providing information, training, material goods, or other services; (d) are sponsored or facilitated by coalition members or partners acting on their behalf, and (e) are delivered to the community served by the coalition.

Media coverage was defined as the promotion of the initiative or its activities through coverage by a media channel (e.g., newspaper, radio, television) or by distribution of materials related to the initiative, group, or its efforts (e.g., flyers, brochures). Documented entries were coded as media coverage if they met the following criteria: (a) had already occurred; (b) were an instance of coverage through radio or television time, newspaper articles, Internet, advertising, newsletters, other media outlets, or other routine distribution of materials; and (c) featured the initiative or its activities. An example of media coverage is Drug Free Osage County wrote a

brief article regarding the coalition's efforts to address underage drinking, which was included in the county newspaper.

Interobserver agreement. Interobserver agreement was based on scoring of coalition activities by two independent coders from The University of Kansas Work Group for Community Health and Development. A primary observer in the KU Work Group independently scored all documented coalition efforts. Then, approximately 50% of entries were uniquely scored by another KU Work Group observer for agreement. Agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements. Then, the quantity was multiplied by 100%.

Sustainability of community changes. Sustainability of community changes was measured using a survey of documented program, policy, and practice activities facilitated by each coalition from January 1, 2009 until June 30, 2012. Additionally, the context and conditions related to sustainability of community changes were measured using a semi-structured interview protocol (Appendix E). Representatives from each of the seven intervention communities were invited to participate in the survey and interview, of which representatives from three communities (i.e., Nemaha, Reno, and Sumner) responded and were included in this study for analysis.

Sustainability interview. The sustainability interview was an 18-item instrument used to obtain qualitative information regarding the context and conditions that supported or hindered the sustainability of community changes and evidence-based strategies. The sustainability interview was divided into five categories: (a) Context of the Initiative (three questions), (b) Critical Events of the Initiative (four questions), (c) Assessment of Strengths and Challenges (three questions), (d) Key Resources and Supports (four questions), and (e) Future Plans and

Recommendations (four questions). Immediately prior to the interviews, participating representatives gave consent for their responses to be audio recorded to support accurate data collection and analysis. The duration of each interview was 45 – 60 minutes, and responses were recorded using a Sony ICD-UX81 digital voice recorder that is equipped with a universal serial bus (USB) connector.

Sustainability survey. The responding representatives also reviewed a list of their coalition's implemented community changes in an electronic document and selected the listed community changes that have been sustained since the conclusion of the intervention. The percentage of community changes that were sustained was analyzed by dividing the number of sustained community changes by the total number of changes implemented between 2009 and 2012, and multiplying by 100%. Additionally, community changes were categorized and analyzed by type (i.e., program, policy, practice). The data were displayed using descriptive statistics (e.g., means, ranges, and standard deviations).

Underage drinking outcomes. Several measures were used to examine the effects of the intervention on changes in underage drinking and associated outcomes across communities, including: (a) 2007 – 2012 self-reported past 30-day use measures; (b) 2007 – 2012 risk and protective factor data; and (c) 2007 – 2012 data for alcohol-related motor vehicle injuries and fatalities. For this study, underage drinking measures included self-reported behaviors obtained from the Kansas Communities That Care Survey (http://beta.ctcdata.org/). The survey has shown internal consistency with Cornbach's alpha at or above .60 across scales (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002). Kansas students in grades 6, 8, 10, and 12 participated in the Kansas Communities That Care Survey (KCTC). The survey findings were analyzed and reported across students, demographic characteristics, and behavioral outcome measures.

Past 30-day use. Past 30-day alcohol consumption was defined as consuming any amount of alcohol at least 30 days prior to completing the survey [i.e., “On how many occasions (if any) have you had beer, wine or hard liquor during the past 30 days?”]. The survey assessed the self-reported prevalence of problem behaviors across multiple levels (e.g., family, peer, school, and community) and domains, including (e.g., alcohol consumption. For this study, data for the percentage of youth in grades 6, 8, 10, and 12 who responded “at least once” to past 30-day alcohol consumption was used to examine the prevalence of alcohol consumption trends in the intervention and comparison communities.

Influencing factors. Influencing factors are antecedent and consequent conditions that occasion, maintain, or reduce the occurrence and frequency of underage drinking. The present study used self-reported influencing factor data related to social norms, social access, and enforcement from the KCTC Survey to examine setting events and motivating operations for underage drinking. In the context of this study, enforcement of underage drinking laws were examined by the following KCTC Survey item: “If a kid drank some beer, wine or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood would he or she be caught by the police?” Social norms were measured using responses from the question “How wrong would most adults in your neighborhood, or the area around where you live, think it was for kids your age to drink alcohol?” Social access were assessed from the question “If you wanted to, how easy would it be for you to get beer, wine, or hard liquor (for example, vodka, whiskey, or gin)?”

Motor vehicle injuries and fatalities. In addition to measuring underage drinking measures, the present study used rates of reported alcohol-related motor vehicle injuries and fatalities involving youth as a population-level indicator of underage drinking. The motor vehicle injuries and fatalities data were based on the Kansas Department of Transportation’s 2007 –

2012 alcohol-related motor vehicle crashes involving youth resulting in injuries and fatalities. The data were analyzed by intervention community regarding the number of reported injuries and fatalities by year.

Independent Variables

A number of independent variables were used in the present study (see Table 3, above). Coalition development activities by type and the Kansas SPF-SIG Collaboration and Capacity Survey were used to measure the number and types of capacity building activities associated with improvements in community readiness for change munity (Research Question 1). Levels of action plan completion were measured to analyze how local coalitions implemented and sustained prevention efforts (Research Question 2). The number and types of community changes were measured to examine the degree to which the implementation of prevention interventions were associated with improvements in underage drinking outcomes (Research Question 3). In the sections below, each independent variable is presented in greater detail.

Coalition development activities by type. Coalition members from the intervention communities documented discrete instances of development activities related to enhancing the coalition's capacity to support underage drinking prevention efforts. Development activities were defined as actions taken to prepare or enable the group to address its goals and objectives (Appendix D). Particularly, development activities can support internal practice changes within the coalition. An example of a development activity is the Community Health Coalition of Finney County participated in a group technical assistance conference call, during which coalition representatives discussed updating their action plans to support the implementation of their evidence-based strategies.

Collaboration and capacity. The Kansas SPF-SIG Collaboration and Capacity Survey was an online survey designed to measure how various sectors in the intervention communities worked together to address underage drinking. To ensure a diverse representation in responses, at least one representative from the 12 key community sectors identified to support prevention activities participated in the survey. Across the intervention communities, survey participants represented the following 12 community sectors: (1) Business community; (2) Civic and volunteer groups; (3) Healthcare professionals, (4) Law enforcement agencies, (5) Media, (6) Parents, (7) Religious or fraternal organizations, (8) School, (9) State, local, or tribal agencies, (10) Youth, (11) Youth-serving agencies, and (12) Other organizations involved in reducing substance abuse.

The survey consisted of 23 items; five items were related to demographics; 11 assessed collaboration efforts (e.g., use or organizational and community networks, coordinating activities with other organizations, and sharing information with community sectors); and seven items related to types of capacity building activities (e.g., community mobilization, increasing community awareness of underage drinking, and increasing facilitation skills). The survey was electronically administered in June 2008 and April 2012 to the study communities, and the data were analyzed using frequencies and percentages of responses for each survey question.

Levels of action plan completion. Action plan completion was measured using an Action Planning tool, a web-based instrument developed by the KU Work Group. The tool permitted the documentation of specific action steps, individuals responsible for supporting the completion of those steps, specific timelines for completion, and progress status updates on action plan completion. Evidence of completed action plan steps was supported by, also developed by the KU Work Group. Validation methods of completed action steps included

review of meeting minutes, written laws or other policies, technical reports submitted to community stakeholders, and media coverage, as well as documented activities in the Online Documentation and Support System (ODSS),.

Data Analysis

To examine the coalition activities that supported implementation of the SPF intervention, several types of quantitative analyses were used, including descriptive statistics, frequency counts, and percentage distributions. The descriptive analyses were conducted for community readiness, action plan implementation, and community changes.

Dependent variables. Several types of analyses were used to examine changes in community readiness for change, the number and types of community activities, and underage drinking and associated outcomes. In the following sections, the analyses for each dependent variable is described in detail.

Community readiness. For each intervention community, capacity and readiness scores were visually compared both within and across dimensions to facilitate visual inspection of baseline and post-intervention levels of community capacity and readiness. Moreover, ranges of scores were used to examine differences in community capacity and readiness for SPF intervention communities. In accordance with the Tri-Ethnic Survey scoring criteria, each dimension was scored at a certain stage if and only if the criteria for all previous stages were met. For example, a community readiness score of 6 (i.e., Imitation stage) could only be assigned if and only if all criteria for the previous stages (i.e., No Awareness, Denial/Resistance, Vague Awareness, Preplanning, Preparation) have already been achieved. After completing independent scoring, the two scorers discussed the scores for each key informant interview to obtain consensus.

After reaching consensus, the independent scores were combined into an aggregate score for each dimension. After obtaining combined scores for each dimension across interviews, the scores were divided by the number of interviews conducted in the community, yielding a total score for the dimension. Then, each dimension's total score was added and divided by six to obtain the overall score corresponding to the community's stage of readiness for change, with scores rounded down. Appendix F shows an illustrative example of how scores were calculated for the Tri-Ethnic Survey for Community Readiness. In Appendix F, the overall score would be rounded to 4.0, corresponding to an overall community readiness stage of Preplanning.

Number and types of community changes. Interobserver agreement for community changes were calculated by dividing the number of agreements by the number of agreements plus disagreements, and multiplying the quotient by 100%. For this study, acceptable interobserver agreement were established at 80% or above. Cumulative graphs were used to examine the number and pattern of community changes from 2009 – 2012 in each of the seven intervention communities. Descriptive statistics were used to examine the implementation of community changes. Specifically, both the number and type of community changes within and across communities were analyzed using frequency counts, percentage distributions, and mean scores.

Sustainability of community changes. Sustained community changes were analyzed by dividing the number of sustained community changes by the total number of changes implemented between 2009 and 2012, and multiplying by 100%. Additionally, community changes were categorized and analyzed by type (i.e., program, policy, practice). The data were displayed using descriptive statistics (e.g., frequencies, means, and standard deviations). Data from the structured interview were coded based on categories, or themes, using an inductive

thematic analysis methodology described above. An inductive approach to thematic analysis removes potential researcher bias of theoretical or conceptual preconceptions. Thus, an inductive thematic analysis is data-driven rather than theory-driven.

Two researchers (i.e., one graduate research assistant and one undergraduate research assistant) reviewed the protocol outlined by Braun and Clarke (2006) for conducting thematic analyses. After reviewing the protocol, the researchers independently transcribed the interviews and identified key phrases related to each question (e.g., “maintained partnerships,” “seeking additional funding,”) after which the independent scorers discussed the transcripts to rectify ambiguous transcriptions. Then, they developed an initial set of codes to classify key phrases; the 31 initial codes were then reclassified into six broader codes based on from the initial data set. The transcribed data were classified based on the refined list of codes. From the six codes, two themes emerged: (a) perceived effectiveness and (b) facilitating and impeding factors of sustainability.

Underage drinking outcomes. Prevalence of past 30-day use and influencing factor outcomes were analyzed using visual inspection to examine annual rates of population-level behavior related to underage drinking. Inferential statistics were used to examine whether significant differences exist between the intervention and comparison communities, and between pre-intervention and post-intervention measures. Two-way repeated measures analyses of variance (ANOVAs) with post-hoc pairwise comparisons were used to analyze whether statistically significant differences existed in underage drinking outcomes between the intervention and comparison communities. In addition, independent samples *t*-tests were used to investigate whether there is a statistically significant difference between 2006 and 2012 underage drinking outcomes across intervention communities. To analyze data related to influencing

factors (i.e., social norms, social access, and enforcement) intervention communities prioritizing the respective influencing factor and their matched comparison communities were included.

Independent variables. Several types of analyses were used to examine how coalitions supported capacity building activities and action plan completion to facilitate community changes and improvements in underage drinking outcomes. In the following sections, the analyses for the independent variables are described in detail.

Coalition development activities. Cumulative graphs were used to examine the number and pattern of development activities from 2009 – 2012 in each of the seven intervention communities. Additionally, aggregate trends in development activities supported within and across the intervention communities were displayed. Particularly, the number and type of development activities across communities were analyzed using percentage distributions and mean scores.

Collaboration and capacity. Community representative responses from the Kansas SPF-SIG Collaboration and Capacity Survey were collected and analyzed using percentages, frequencies, and means. Coalition demographics (e.g., number of survey respondents, degree of active engagement) for each community was displayed in tables.

Action plan implementation. The frequency and percentage of action steps were calculated to analyze the degree to which action plans were implemented by community coalitions to support the facilitation of community changes. The number of completed action steps were calculated and presented as a percentage of the total number of action steps supported across strategies. Appendix G shows an illustrative example of an implemented action plan from an intervention community.

Results

Community Capacity Outcomes

Community readiness. Overall, 37 key informants participated in community readiness interviews, with an average of approximately five informants per community (*Range*: 4 – 6). Approximately 42.9% of the intervention communities (i.e., Kingman, Nemaha, and Osage) conducted the recommended minimum of six interviews, and another 42.9% conducted five interviews (i.e., Finney, Reno, and Sumner). Clay Counts Coalition conducted four key informant interviews. Overall, the intervention communities showed an increase in their readiness to adopt and effectively use evidence-based strategies to address underage drinking (Table 7). The data indicate that prior to implementing the intervention, 71.4% of communities ($N = 5$) reported either Denial/Resistance or Vague Awareness of the problem behavior and of local coalition efforts to address underage drinking, with overall scores ranging from Denial/Resistance to Preplanning.

Table 7

Percent of Mean Community Readiness Stage Improvement across Communities (N = 7)

Community Readiness Stage	Percent of Communities by Experimental Condition	
	Baseline (%)	Intervention (%)
No Awareness	--	--
Denial/Resistance	14.3	--
Vague Awareness	57.1	--
Preplanning	28.6	28.6
Preparation	--	57.1
Initiation	--	14.3
Confirmation/Expansion	--	--
Stabilization	--	--
Community Ownership	--	--

Note. Cells containing dashes indicate stages in which no community reported achieving the corresponding stage of mean community readiness.

In the intervention condition, 57.1% ($N = 4$) of the communities improved their readiness to Preparation, with readiness stages ranging from Preplanning (14.3%; $N = 1$) to Initiation (14.3%; $N = 1$). None of the intervention communities experienced lacking awareness of underage drinking or of coalition efforts. Likewise, there were no communities that reported experiencing Stabilization (i.e., active leadership in long-term visibility; considerable resources for continued support); Confirmation (i.e., support from leadership in expanding efforts; wide community support); and Community Ownership (i.e., diversified resources to support efforts; continuous review of evaluation findings).

An analysis of each communities' changes in readiness for change show that 85.7% of communities increased their readiness by either one or two stages (e.g., Vague Awareness to Preplanning) (Figure 4). Osage County showed the greatest improvement in community readiness. Although Osage County showed the lowest baseline readiness stage (i.e., Denial/Resistance) among the participant communities, it experienced a three-stage improvement to Preparation in the intervention condition. Both Clay and Kingman Counties, by contrast, showed the least improvement in community readiness, with both communities increasing from Vague Awareness in the baseline condition to Preplanning in the intervention phase.

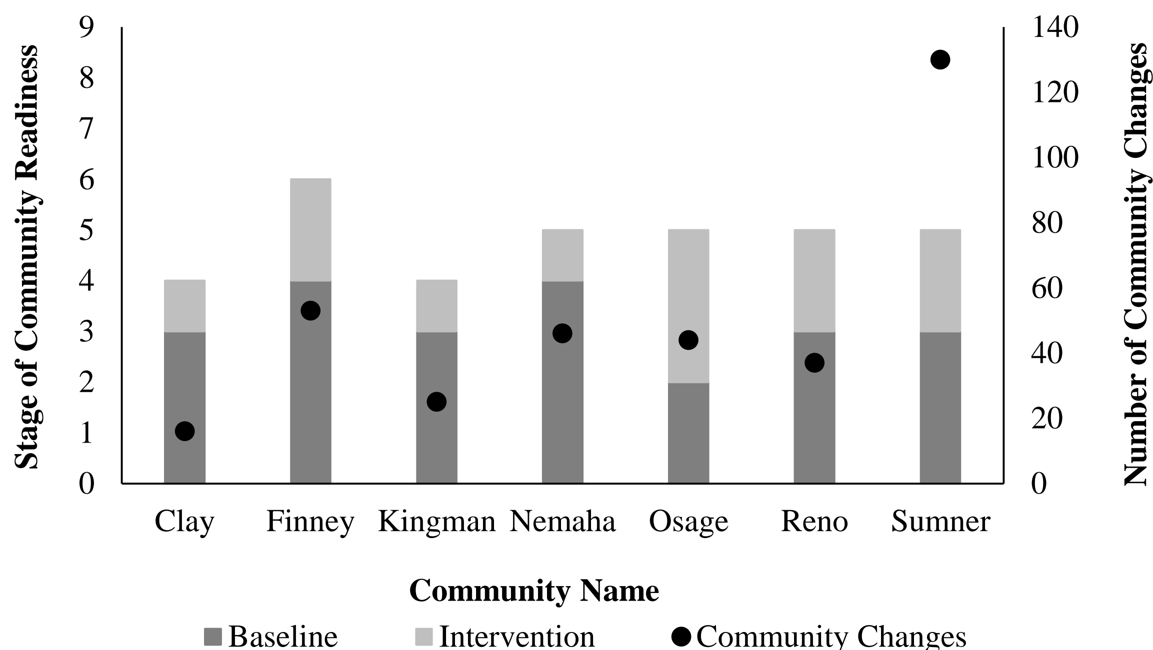

Figure 4. Relationship between mean improvement in community readiness stages across dimensions and the number of community changes

Improvement in community-level readiness by dimension. Communities reported improvements in community readiness scores to address underage drinking across all six dimensions (Table 8). The greatest improvement was in Efforts, defined as the degree to which there are efforts and community changes (e.g., programs and policies) that address underage drinking.

The data indicate that coalitions increased their overall readiness in the Efforts dimension from Preplanning (*Range* = Denial/Resistance – Preparation) to Initiation (*Range* = Preplanning – Stabilization). The smallest improvement was in Community Climate, defined as the prevailing attitude of the community toward underage drinking. Across the intervention communities, readiness for change in community climate increased from a baseline rating of Vague Awareness (*Range* = Vague Awareness – Preplanning) to an intervention rating Preplanning (*Range* = Vague Awareness – Preparation).

Table 8

Overall Changes in Community Readiness Stages by Dimension across Intervention Communities

Community Readiness Dimension	Baseline Community Readiness Stage Score		Intervention Community Readiness Stage Score		Improvement in Community Readiness Stages
	Mean	SD	Mean	SD	
Efforts	3.9	1.05	6.4	0.88	+3
Community Knowledge of Efforts	3.4	0.46	5.1	0.55	+2
Leadership	3.7	0.49	5.4	0.96	+2
Community Climate	3.37	0.42	4.2	0.92	+1
Community Knowledge of the Issue	3.5	0.60	5.1	1.03	+2
Resources	3.4	0.56	5.6	1.06	+2

Associations between the number of community changes and improvement in community readiness were examined to determine the degree to which increased readiness for change measures may be related to the implementation of new or modified programs, policies, and practices within communities. A two-tailed Pearson correlation revealed a moderate but statistically non-significant correlation between the number of community changes and overall mean improvement in readiness, $r(5) = .34$, $p = .46$. Two-tailed Pearson correlations also revealed a moderate but statistically non-significant correlation between the number of community changes and community readiness related to Efforts, $r(5) = .50$, $p = .25$. However, the correlation analysis showed that there was a weak correlation between the number of community changes and the community's knowledge of existing efforts to address underage drinking, $r(5) = .26$, $p = .57$

Research Question 1: Implementation of Capacity Building Activities

Coalition development activities by type. The intervention communities completed 693 development activities related to enhancing coalition capacity to support local prevention efforts (Figure 5). A plurality of coalition efforts (40.8%, *N* = 283) were related to meetings to coordinate coalition efforts. An illustrative example of internal meetings to build capacity is that Reno County Communities That Care Coalition held coalition meetings to develop strategies to increase youth participation in local prevention efforts. Almost 20% (*N* = 134) of development activities were related to training and technical support. The training and technical support activities included discrete instances of coalition representatives participating in monthly technical assistance calls provided by the state prevention team, and engaging in outside training provided by trainers of evidence-based programs (e.g., Strengthening Families).

Collaborative efforts represented 15% of documented development activities (*N* = 109); these actions included meeting with community sector representatives from school districts, retailers, media outlets, government, and law enforcement to plan and coordinate local prevention efforts. For example, the Clay Counts Coalition met with the local radio station to discuss options for purchasing radio advertisements to disseminate information regarding the statewide media campaign (i.e., TeenThinking). One-fifth of activities (*N* = 142) were not categorized by internal coalition meetings, presentations, collaborative efforts, training, or technical support. The other activities consisted of reviewing coalition finances and SPF-SIG reporting requirements, and disseminating weekly updates through internal coalition electronic mailing lists.

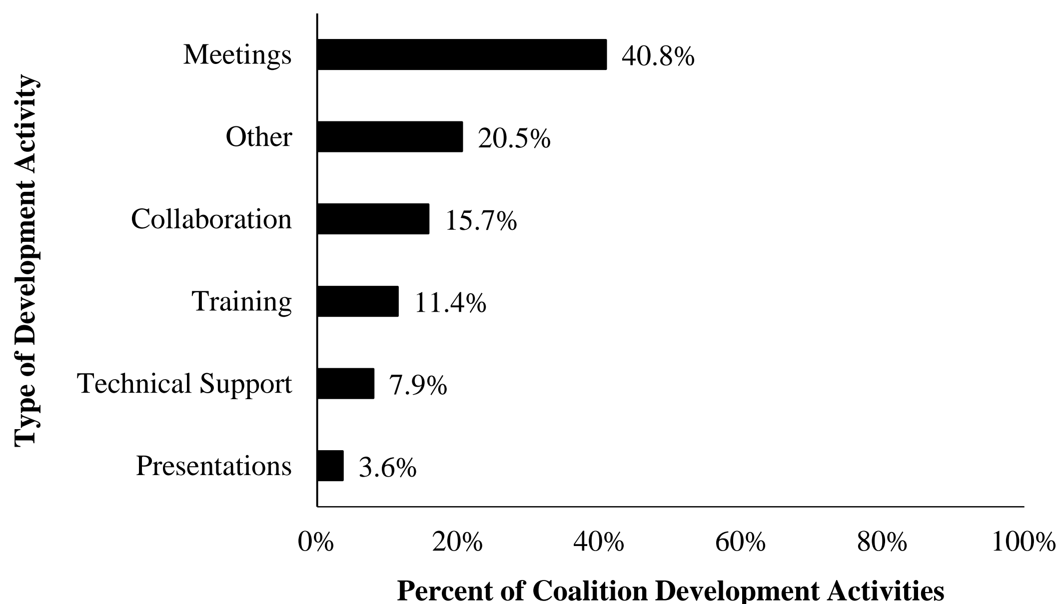

Figure 5. Intervention communities' development activities by type (*N* = 693).

Collaboration and capacity building. A total of 76 community representatives participated in the Collaboration and Capacity survey in the baseline condition; in the intervention condition, 111 representatives participated in the survey (Table 9). Baseline findings from the Kansas SPF-SIG Collaboration and Capacity Survey indicate that approximately 93% (*N* = 74) of coalition members across intervention communities were actively involved at least half-time in efforts to address underage drinking in their respective communities.

Table 9

Coalition Member Characteristics for Intervention Communities

SPF Community	Assessment Type (Baseline/ Intervention)	Member and Active > 50%	Member and Active < 50%	Nonmember and Active	Total Participation
Clay	Baseline	11	0	0	11
	Intervention	13	1	1	15
Finney	Baseline	12	1	0	13
	Intervention	9	4	2	15
Kingman	Baseline	12	0	0	12
	Intervention	5	10	1	16
Nemaha	Baseline	12	0	0	12
	Intervention	13	4	4	21
Osage	Baseline	9	0	0	9
	Intervention	7	3	4	14
Reno	Baseline	10	0	1	11
	Intervention	12	3	0	15
Sumner	Baseline	8	0	0	8
	Intervention	15	0	0	15

Intervention survey results reveal that while more community members became involved with partner coalitions, there was a more varied distribution of engagement in SPF-related prevention efforts post-intervention. In particular, partner coalitions reported that while more members participated in less than 50% of the prevention efforts post-SPF funding, there were more nonmember individuals in the community who actively supported coalitions' prevention efforts.

The survey findings reveal marked improvements in the number and types of capacity building activities supported by intervention communities (Figure 6). The greatest improvement in capacity efforts was in collaboration with private sectors, community mobilization activities,

and community awareness, while negotiation and conflict management activities showed the smallest increase between baseline and post-intervention assessments. Promoting community awareness was the most common prevention effort in which partner coalitions engaged in both baseline and post-intervention conditions. A two-tailed Person correlation analysis revealed a moderately positive but statistically nonsignificant association between the number of capacity-building activities supported by the intervention communities and the number of facilitated community changes, $r(5) = .62$, $p = .14$.

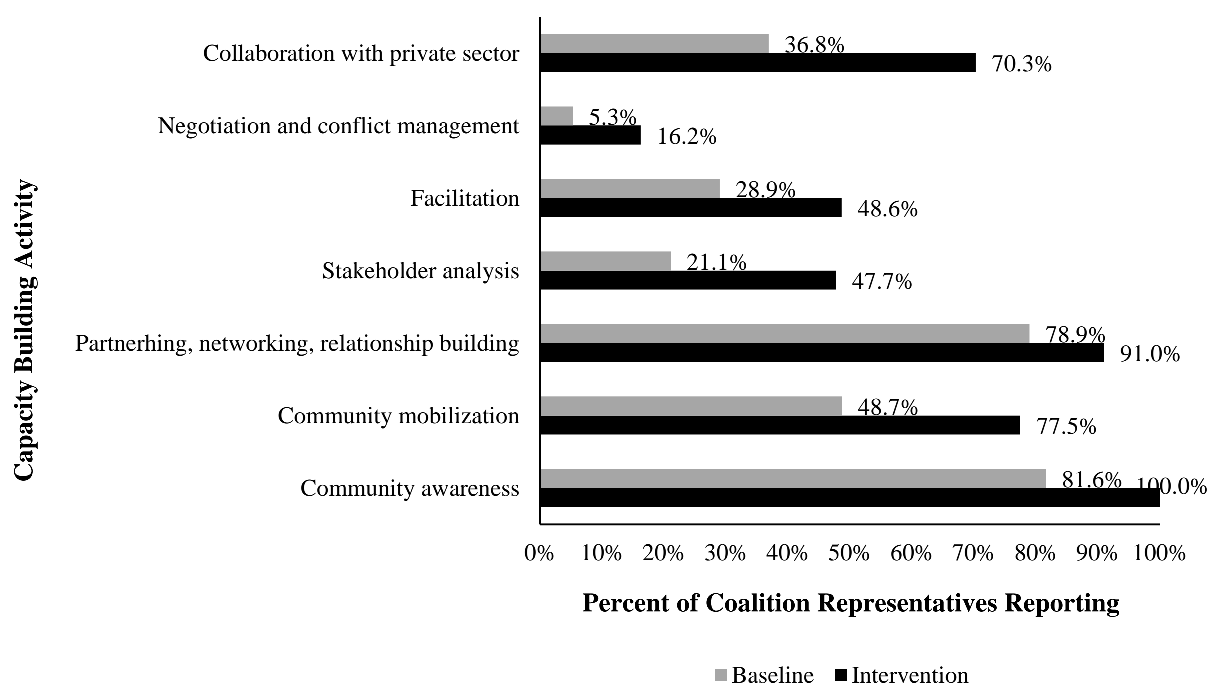

Figure 6. Distribution of capacity building efforts in intervention communities. The total number of coalition representatives responding in the baseline condition was 76, and 111 coalition representatives responding in the intervention condition.

As part of the identified capacity building efforts, the intervention communities collaborated with a variety of groups across community sectors. Baseline findings from the Collaboration and Capacity Survey reveal that partner coalitions collaborated with community and tribal agencies, as well as media, to support underage drinking prevention efforts (Figure 7).

Post-intervention results, however, show a substantial increase in the number and types of collaborative sectors. While baseline survey findings indicate overall coalition collaboration with three community sectors, post-intervention results show active engagement with 15 agencies and sectors. Partner coalition representatives cited media as the most frequent collaborative sector across conditions, followed by healthcare professionals, law enforcement, schools, and other prevention groups.

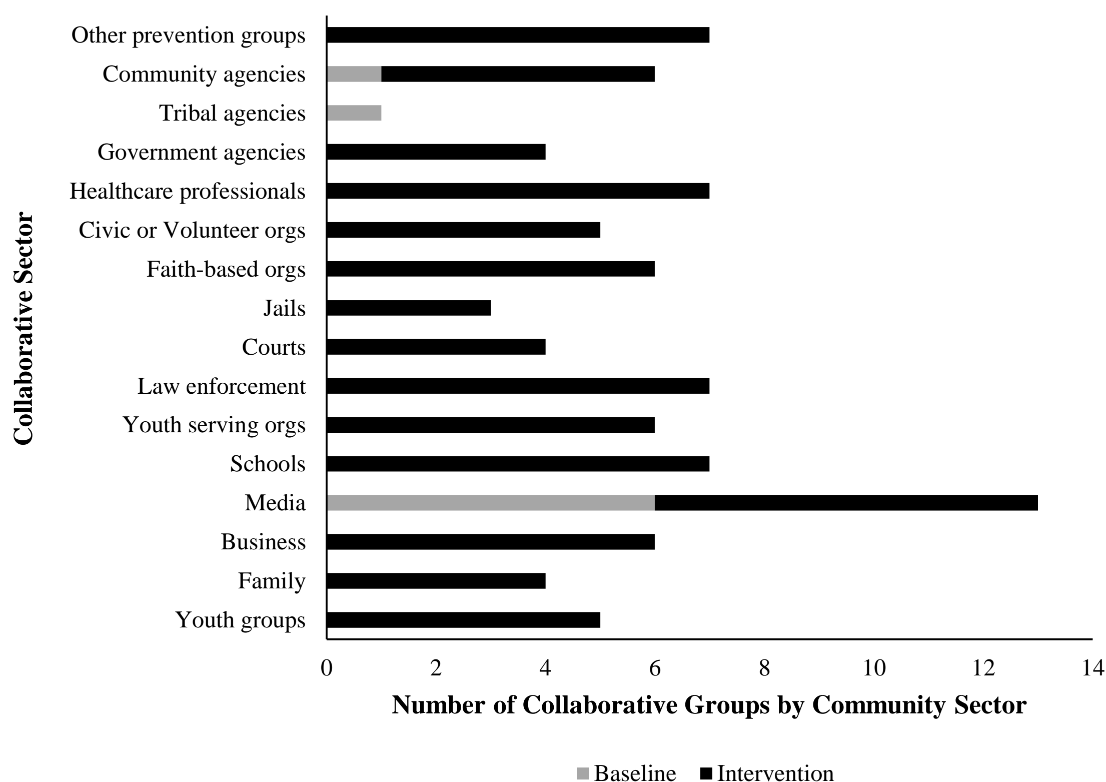

Figure 7. Number of collaborative groups by community sector sectors across intervention communities. Sectors with no gray bar indicates that in the baseline condition, the intervention communities did not collaborate with any groups within the respective sector.

Research Question 2: Implementation of Evidence-Based Strategies

The intervention communities implemented 18 evidence-based strategies; approximately 77.8% ($N = 14$) of the strategies were evidence-based programs and the remaining 22.2% ($N = 4$) were environmental strategies (Appendix H). Fifty percent ($N = 9$) of the evidence-based

strategies addressed social norms, and approximately 16.7% (*N* = 3) targeted social access, and 22.2% (*N* = 4) addressed enforcement as influencing factors of underage drinking. The most commonly implemented strategy across all communities was Communities Mobilizing for Change on Alcohol, with 71.4% (*N* = 5) of intervention communities supporting its implementation.

Table 10

Evidence-Based Strategies, Influencing Factors, and Community Changes Supported by Intervention Communities

Community Name	Number of Evidence-Based Strategies		Targeted Influencing Factors	Number of Community Changes		
	Program	Environmental Strategy		Program	Policy	Practice
Clay	1	1	Social Norms Enforcement	7	3	6
Finney	8	2	Social Norms Enforcement	28	1	24
Kingman	3	1	Social Norms Social Access	15	0	10
Nemaha	2	1	Social Norms Social Access	29	4	13
Osage	2	1	Social Norms Social Access Enforcement	8	1	35
Reno	2	1	Social Norms Social Access	17	4	16
Sumner	3	1	Social Norms Social Access	60	12	58

Table 10 above shows the number and types of evidence-based strategies, influencing factors targeted, and the number and types of community changes supported by each intervention

community. Interobserver agreement procedures were conducted for 50% of all documented community changes. The mean interobserver agreement was 92.3% (*Range* = 89.1% - 94.6%).

Number and Types of Community Change

During the intervention phase (January 1, 2009 – June 30, 2012), the seven partner coalitions collectively implemented 351 community changes (i.e., new or modified programs, policies, and practices). The communities implemented a mean of 50 community changes (*SD* = 37.44) during the intervention phase. Figure 8 below illustrates the cumulative number of community changes over time for each intervention community. The data for each community are presented in a cumulative graph. Because cumulative graphs do not contain visual reductions in the data, the trend lines continually increase. Rather, slower rates of facilitated community changes are denoted by flatter slopes between data points, and faster rates are depicted by steeper slopes.

The data indicate differential rates of facilitated community changes across the communities. Approximately 57.1% of intervention communities (*N* = 4) showed a delayed rate of implementation of community changes for four or more quarters. Clay County showed a slow rate of implementation of community changes for 57.1% of all 14 quarters (*N* = 8) during the intervention phase. In addition, Kingman County experienced a slow rate of implementation for approximately 28.6% (*N* = 4) of intervention quarters. Both Nemaha and Reno Counties experienced a postponement of community change implementation for 35.7% (*N* = 5) quarters of the intervention phase.

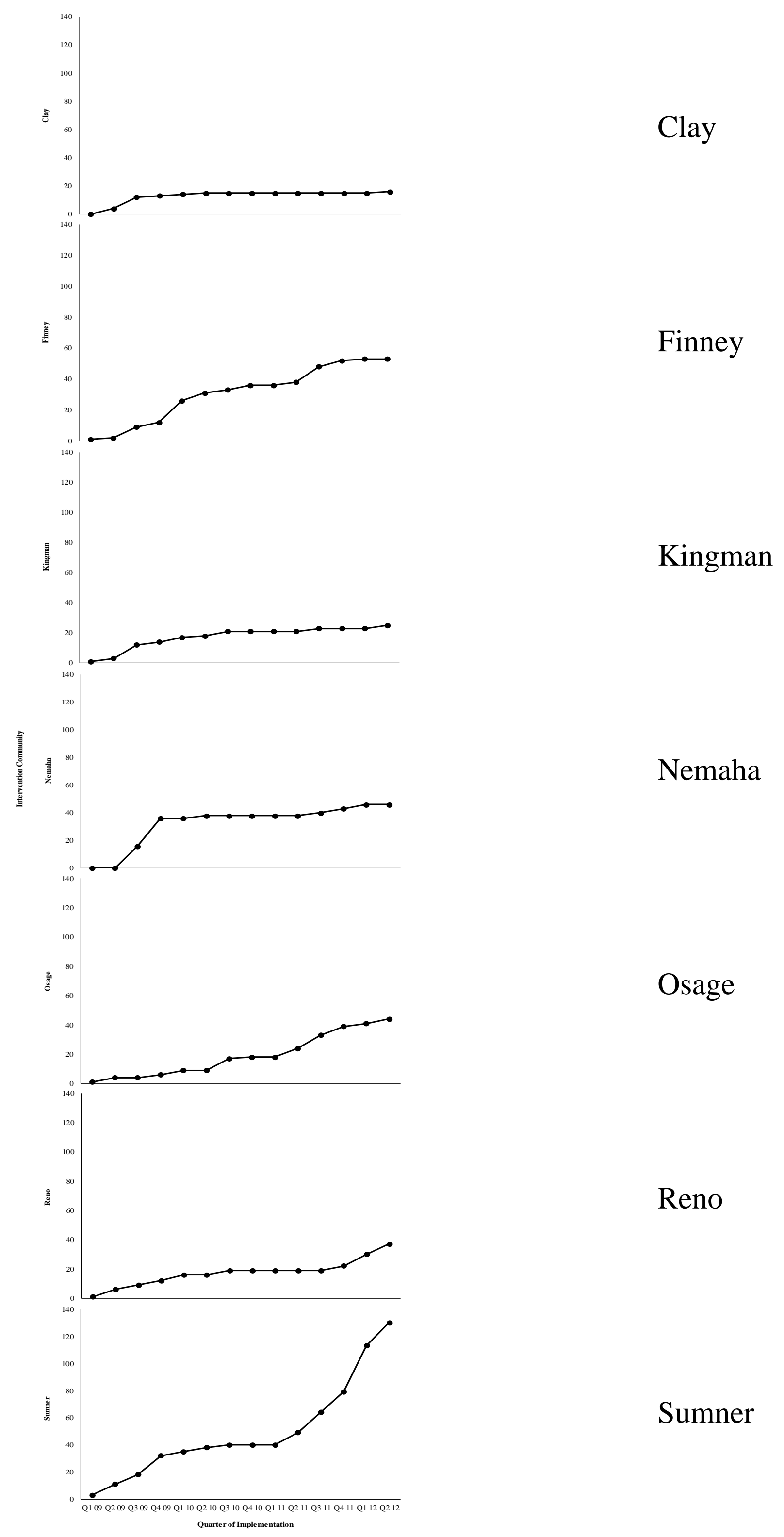

Figure 8. Cumulative community changes over time by intervention community.

The results show a consistent period of delay in implementing community changes across the four previously mentioned communities from July 2010 through June 2011. In contrast, three communities (i.e., Sumner, Finney, and Osage) showed a steady rate of increase of community change activities in the majority of the quarters in the implementation phase. Sumner County showed the most substantial rate of facilitated community changes, with a total of 130 new or modified programs, policies, and practices implemented during the intervention phase.

Figure 9 shows the overall distribution of program, policy, and practice changes by year, from 2009 – 2012. Approximately 46.7% (*N* = 164) of community changes supported implementation of new or modified programs (e.g., Too Good for Drugs, YouthFriends), 7.1% (*N* = 25) were policy changes (e.g., courts ordering parents to attend parenting classes through the Strengthening Families program), and 46.2% (*N* = 162) were new or significantly modified practices (e.g., stricter enforcement of checking identification by retailers) established in communities. The findings indicate that more community changes occurred in 2009 than in any other year in the intervention phase, consisting of approximately 35.6% (*N* = 125) of all implemented community changes. In contrast, 2010 showed the fewest number of community changes, representing 17.7% (*N* = 62) of all facilitated changes.

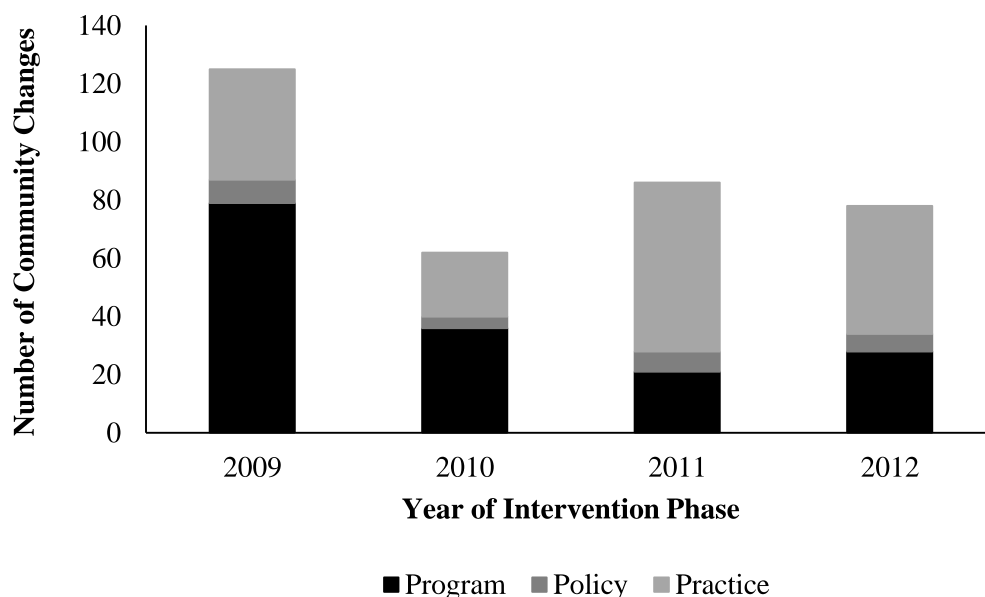

Figure 9. Distribution of implemented community changes across intervention communities, 2009 – 2012.

Number and types of services provided and media coverage. Table 11 shows the number of community changes, services provided, and media coverage for each community. A total of 798 service activities were provided across the intervention communities (M = 114, SD = 54.88), ranging from 60 to 180 services per community. Moreover, there were 494 documented cases of media-related awareness activities related to underage drinking that were facilitated by the partner coalitions (M = 70.6, SD = 59.65), ranging from 10 to 152 media activities per community. The partner coalitions supported media coverage through newspapers, radio and television, brochures and flyers, and the Internet. A two-tailed Pearson correlation found a moderate positive association between the number of facilitated community changes and services provided, $r(5) = .66$, $p = .11$. Furthermore, there was a strong positive correlation between the number of community changes and documented cases of media coverage, $r(5) = .72$, $p = .07$.

Table 11

Number of Community Changes, Services Provided, and Media Coverage for Intervention Communities

Intervention Community	Community Change (*N*)	Services Provided (*N*)	Media Coverage (*N*)
Clay	16	72	10
Finney	53	122	71
Kingman	25	62	19
Nemaha	46	193	152
Osage	44	60	77
Reno	37	109	19
Sumner	130	180	146
Total	351	798	494

Sustainability of implemented community changes. Representatives from three intervention communities (i.e., Nemaha, Reno and Sumner) participated in structured interviews to examine the degree to which community changes were sustained after the conclusion of the SPF-SIG intervention. The findings indicate that 47.9% ($N = 102$) of implemented community changes were sustained across the communities (*Range* = 36.9% - 73.9%). The majority of sustained efforts were new or modified programs (63.7%, $N = 65$), followed by practice changes (30.4%, $N = 31$). Approximately 5.9% ($N = 6$) of the sustained community changes were policy changes. At the individual community level, Sumner County Community Drug Action Team showed the lowest percentage of sustained community changes at 36.9% ($N = 48$), while United 4 Youth of Nemaha County showed the highest percentage (73.9%, $N = 34$). Table 12 shows the number and percent of programs, policies, and practices sustained by each of the three intervention communities participating intervention communities.

Table 12

Distribution of Sustained Community Changes for Nemaha, Sumner, and Reno Counties

Intervention Community	Number of Sustained Community Changes, *N* (%)		
	Program	Policy	Practice
Nemaha	16 (47.1)	1 (2.9)	17 (50.0)
Reno	13 (65.0)	1 (5.0)	6 (30.0)
Sumner	36 (75.0)	4 (8.3)	8 (16.7)
Total	65 (63.7)	6 (5.9)	31 (30.4)

Perceived effectiveness of implemented community changes. Qualitative findings from the sustainability interview indicate that community members from the three participating communities were satisfied with the intervention's effects in addressing underage drinking. The satisfaction of effectiveness was supported by established and maintained partnerships with various community sectors, such as schools, law enforcement, judicial systems, youth, and parents. Particularly, United 4 Youth of Nemaha County noted that law enforcement and schools were satisfied with the reduction in past 30-day use and influencing factor outcomes; coalition representatives in both Reno and Sumner Counties reported similar responses regarding community perceptions of the intervention's effectiveness. In Sumner County, community members continue to communicate their high satisfaction of the intervention's effectiveness regarding implemented community changes and evidence-based programs.

Facilitating and impeding factors of sustaining community changes. The thematic analysis indicated that qualitative findings were grouped by two predominant factors: key resources and supports, and challenges to sustaining efforts. The sustainment of implemented community changes and evidence-based strategies were facilitated by collaborations with community sectors, and individual and corporate donations. All three communities collaborated with schools and law enforcement, while Reno and Sumner Counties further collaborated with the local

judicial system. The findings also indicate that United 4 Youth of Nemaha County established and maintained partnerships with the local government, which resulted in a new community change, post-intervention, based on the recommendation of the county commissioner. Of the three communities examined for sustainability of local efforts, two coalitions (i.e., Sumner County Community Drug Action Team and Reno County Communities That Care) identified a lack of sufficient resources as a significant challenge for sustaining community efforts. Specifically, the Reno County Communities That Care coalition had been fully funded since its inception in 2002 through the conclusion of the intervention in 2012; however, it experienced a substantial reduction in financial resources until later receiving recent funding as a federal Drug-Free Communities grantee.

Implementing Prevention Activities

Action planning and community change. The SPF communities identified 585 action steps across action plans supporting implementation of evidence-based strategies (Table 13). Of those action steps, 91.3% ($N = 534$) were completed by the end of the implementation period (i.e., June 30, 2012).

Table 13

Number and Percentage of Action Steps Completed by Partner Coalitions

Partner Coalition	Completed Action Steps (%)	Action Steps in Progress (%)	Action Steps Not Started (%)	Total Action Steps
Clay Counts Coalition	59 (79.7)	14 (18.9)	1 (1.4)	74
Community Health Coalition of Finney County	121 (85.2)	3 (2.1)	18 (12.7)	142
Kingman County Substance Abuse Prevention Group	89 (89.9)	6 (6.1)	4 (4.0)	99
United 4 Youth of Nemaha County	47 (100)	0 (0)	0 (0)	47
Drug Free Osage County	42 (89.4)	3 (6.4)	2 (4.3)	47
Reno County Communities That Care Coalition	65 (100)	0 (0)	0 (0)	65
Sumner County Community Drug Action Team	111 (100)	0 (0)	0 (0)	111
Total	534 (91.3)	26 (4.4)	25 (4.3)	585

On average, the coalitions completed 92% of their action steps (*Range* = 79.7% - 100%). Moreover, 4.4% ($N = 26$) of identified action steps were in the process of being completed (e.g., administering pretests or posttests required by evidence-based programs, saturation patrol data collection). Three partner coalitions (i.e., United 4 Youth of Nemaha County, Reno County Communities That Care Coalition, Sumner County Community Drug Action Team) completed 100% of their action steps ($N = 47$, 65, and 111, respectively). In contrast, the Clay Counts Coalition completed the fewest percentage of identified steps (79.7%, $N = 59$). A review of the

action steps revealed that action steps identified as “in progress” were those relating to environmental strategies (e.g., Saturation Patrols) and activities to be implemented on an ongoing basis. Approximately 4% (*N* = 25) of action steps had not been implemented by the conclusion of the grant period; these steps were related to evidence-based programs that were not scheduled to begin until after SPF-SIG funding had concluded.

Research Question 3: Underage Drinking Outcomes

Past 30-day alcohol consumption. The results indicate marked decreases in past 30-day alcohol consumption in the intervention communities (Figure 10). The mean prevalence of past alcohol consumption among Kansas youth in the intervention communities across all years in the baseline condition was 33.25% (*SD* = .04), whereas the self-reported prevalence in the intervention condition was 26.12% (*SD* = .03). Compared to the mean baseline prevalence, there was a 21.4% decrease in past 30-day use in the intervention condition among the intervention communities. The findings also showed that in 2012, there was a percent change of a 34.3% reduction in past 30-day use outcomes across intervention communities with respect to the 2006 mean prevalence of 34.99%. Sumner County, Kansas showed the greatest percent decrease from 2006 reported prevalence; the 2012 prevalence of past alcohol consumption was 19.19%, with a percent change reduction of 42.54% with respect to the 2006 prevalence data. The smallest percent reduction was observed in Finney County, which reported a 26.98% reduction in past 30-day use to a 2012 prevalence of 26.94%.

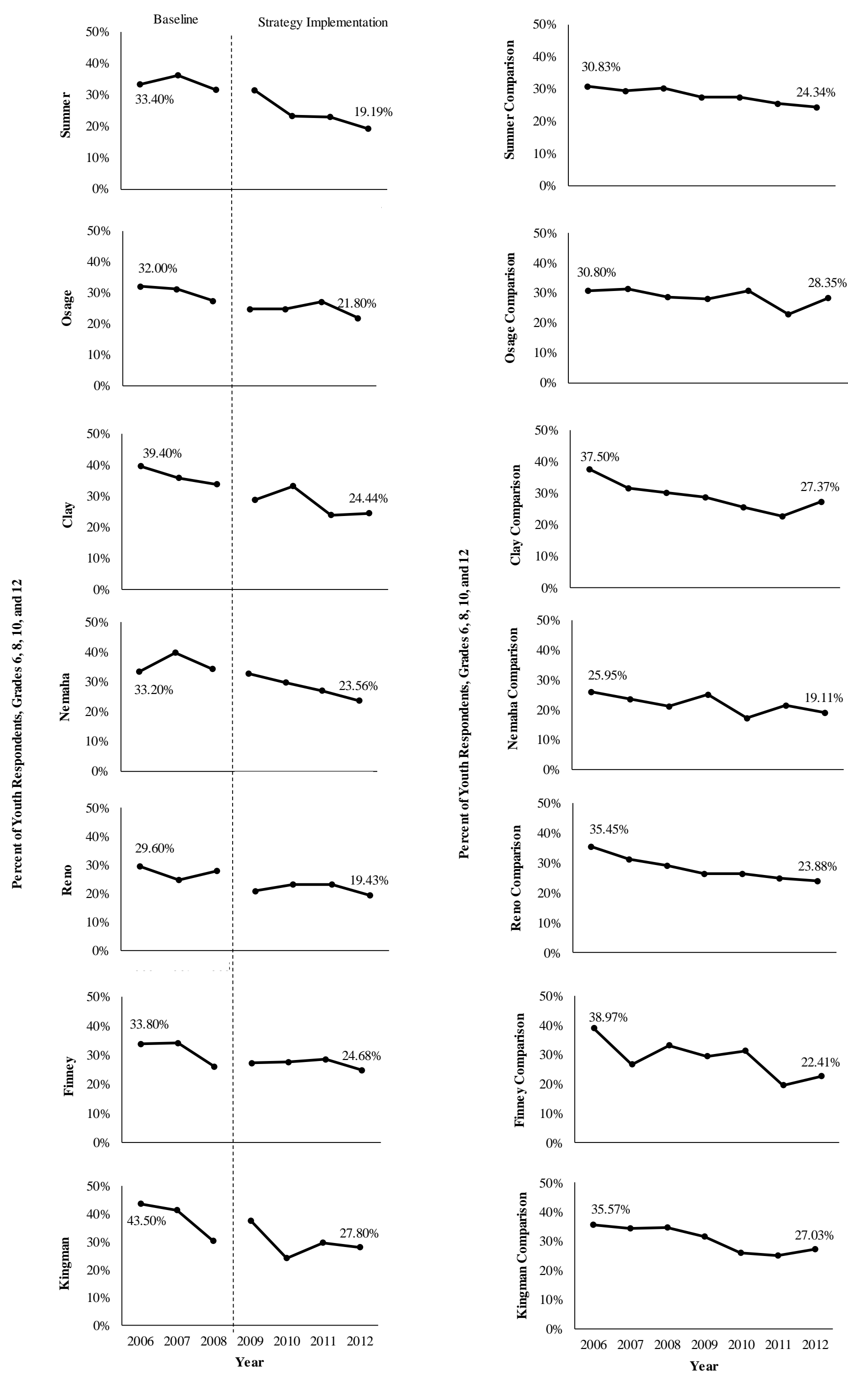

Figure 10. Prevalence of past 30-day use in intervention and comparison communities

The mean prevalence of past alcohol consumption in 2006 for the comparison communities was 33.58% (*SD* = .05), whereas the prevalence in 2012 was 24.64% (*SD* = .03). Compared to the 2006 prevalence, there was a 26.6% decrease in past 30-day use in the 2012

among the comparison communities. Notably, the Finney County comparison community showed a 42.49% decrease in past alcohol consumption to a 2012 prevalence of 22.41%.However, the Osage County comparison community showed only a 7.95% reduction in self-reported past alcohol consumption, from a 2006 baseline prevalence of 30.80%. Overall, the intervention community showed a greater mean percent reduction in 2012 prevalence of past 30-day use with respect to 2006. Whereas the comparison communities showed a mean percent change of a 26.6% reduction (*SD* = .05 in 2006; .03 in 2012), the intervention communities showed a mean percent change of a 34.3% reduction in 2012 outcomes compared to 2006 (*SD* = .05 in 2006; .03 in 2012).

A two-way (intervention group × time) repeated measures ANOVA was conducted to examine differences in the prevalence of past 30-day use over time. The results indicate a statistically significant difference in past 30-day use prevalence over time across all study communities, $F(6,7) = 27.21$, $p < .001$, $\eta_p^2 = .959$. Further analyses of the omnibus ANOVA *F* test revealed that with respect time alone, there was a significant reduction in past 30-day use outcomes, $F(6,72) = 26.28$, $p < .001$, $\eta_p^2 = .687$. However, there was no statistically significant difference in outcomes with respect to group (i.e., intervention versus matched comparison group), $F(6,72) = 1.91$, $p = .09$, $\eta_p^2 = .137$.

A pairwise comparison post-hoc test with a Bonferroni adjustment was conducted on past 30-day use by study year. The post-hoc analyses showed statistically significant differences between the baseline (i.e., 2006 – 2008) and intervention condition (i.e., 2009 – 2012). Specifically, the post-hoc tests showed a statistically significant difference in prevalence between 2006 (*M* = 34.28, *SD* = 4.55) and each of the intervention years, including 2009 (*M* = 28.58, *SD* = 4.05), 2010, (*M* = 26.40, *SD* = 4.04), 2011 (M = 24.55, *SD* = 2.76), and 2012 (*M* = 23.81, *SD* =

3.16), all $p \leq .001$. Statistically significant differences were also found between 2007 ($M = 32.18$, $SD = 5.16$) and 2012 ($M = 23.81$, $SD = 3.16$) prevalence data, $p < .001$. Moreover, the post-hoc analyses indicated significant differences between 2008 ($M = 29.82$, $SD = 3.66$) and 2012 ($M = 23.81$, $SD = 3.16$) self-reported prevalence of past 30-day use, $p = .001$.

Influencing Factors of Underage Drinking

Social norms. In the SPF intervention communities, the results show small to moderate decreases in social norms outcomes in the intervention communities (Figure 11). The overall mean baseline percentage of youth reporting it is “not wrong at all” to consume alcohol across the intervention communities was 5.76% ($SD = 0.01$), and the self-reported percentage in the intervention condition was 4.93% ($SD = 0.01$). Osage County showed the greatest percent decrease from 2006 reported prevalence. In 2006, the percentage of Osage County youth in grades 6, 8, 10 and 12 who reported there was nothing wrong at all with consuming alcohol was 6.60%; the 2012 outcome for social norms was 3.18%, which was a 99.48% reduction from 2006 percentage. In 2012, Clay County showed a 1.76% increase in the number of youth reporting there is nothing wrong with consuming alcohol relative to a 2006 percentage of 5.19%. However, there was a mean percent change in Clay County of a 3.22% reduction in social norms outcomes in the intervention condition, relative to a mean baseline of 4.81%.

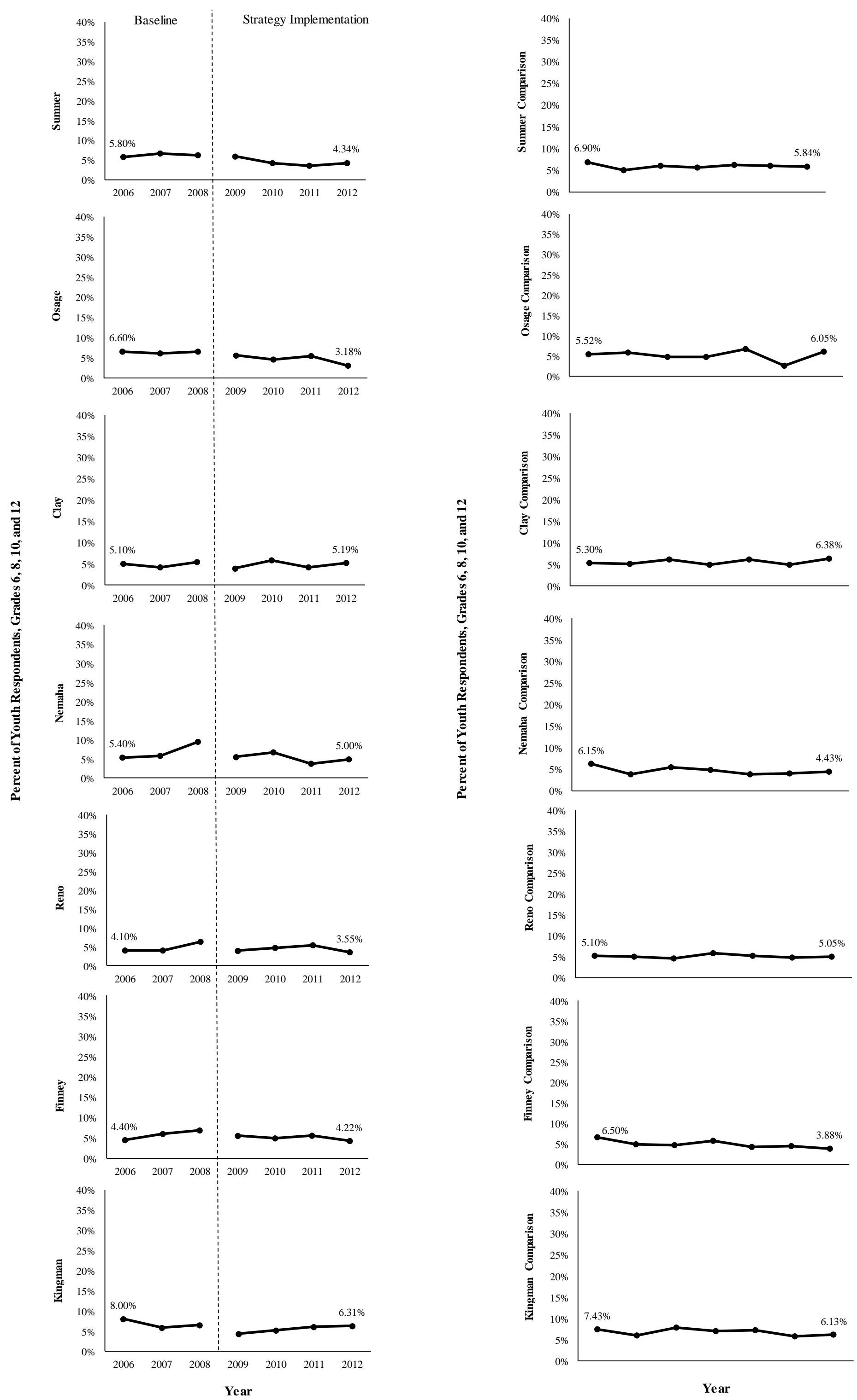

Figure 11. Prevalence of youth reporting “not wrong at all” to consume alcohol

A two-way (intervention group × time) repeated measures ANOVA (intervention group × time) was conducted to examine differences over time in the number of youth reporting not getting caught by law enforcement for consuming alcohol. The results indicated a statistically significant interaction between group (i.e., intervention community versus matched comparison group) and time regarding the percent of youth reporting that it is "not wrong at all" to drink alcohol, $F(6,7) = 5.14$, $p = .025$, $\eta_p^2 = .815$. Further analyses of the omnibus ANOVA revealed that over time, there was a significant difference in social norms outcomes, $F(6,72) = 4.26$, $p = .001$, $\eta_p^2 = .262$. However, there was no statistically significant difference in outcomes between the intervention and comparison communities, $F(1,12) = .014$, $p = .91$, $\eta_p^2 = .001$. Overall, the findings suggest that with respect to the percentage of youth who report there is nothing wrong with consuming alcohol, there was a significant decrease in percentage over time. However, there was no significant difference in percentages between the intervention and matched comparison communities.

Social access. Findings from the Kansas Communities That Care Survey indicate marked decreases in social access outcomes in the intervention communities (Figure 12). The overall mean baseline percentage of youth reporting ease of alcohol access was 27.33% (*SD* = 0.04), whereas the percentage in the intervention condition was 24.45% (*SD* = 0.04). Clay County showed the greatest percent decrease relative to the 2006 levels of social access. In 2012, 23.9% of Clay County youth in grades 6, 8, 10, and 12 reported an ease of gaining access to alcoholic beverages, which was a 28.02% reduction from 2006 findings. The smallest percent reduction was observed in Finney County, which reported a 17.03% reduction in social access outcomes to a 2012 percentage of 23.34%.

The comparison communities also showed an overall reduction in the percentage of youth reporting having received alcohol from adults over time. Notably, the Finney County comparison community showed a 38.01% decrease in binge drinking to a 2012 percentage of 17.25%. However, the Osage County comparison community showed the smallest reduction in social access outcomes, reporting only a 0.38% reduction from a 2006 mean baseline percentage of 25.68%, which is markedly less substantial than the state percent reduction of 18.44% from a 2006 percentage of 26.3%.

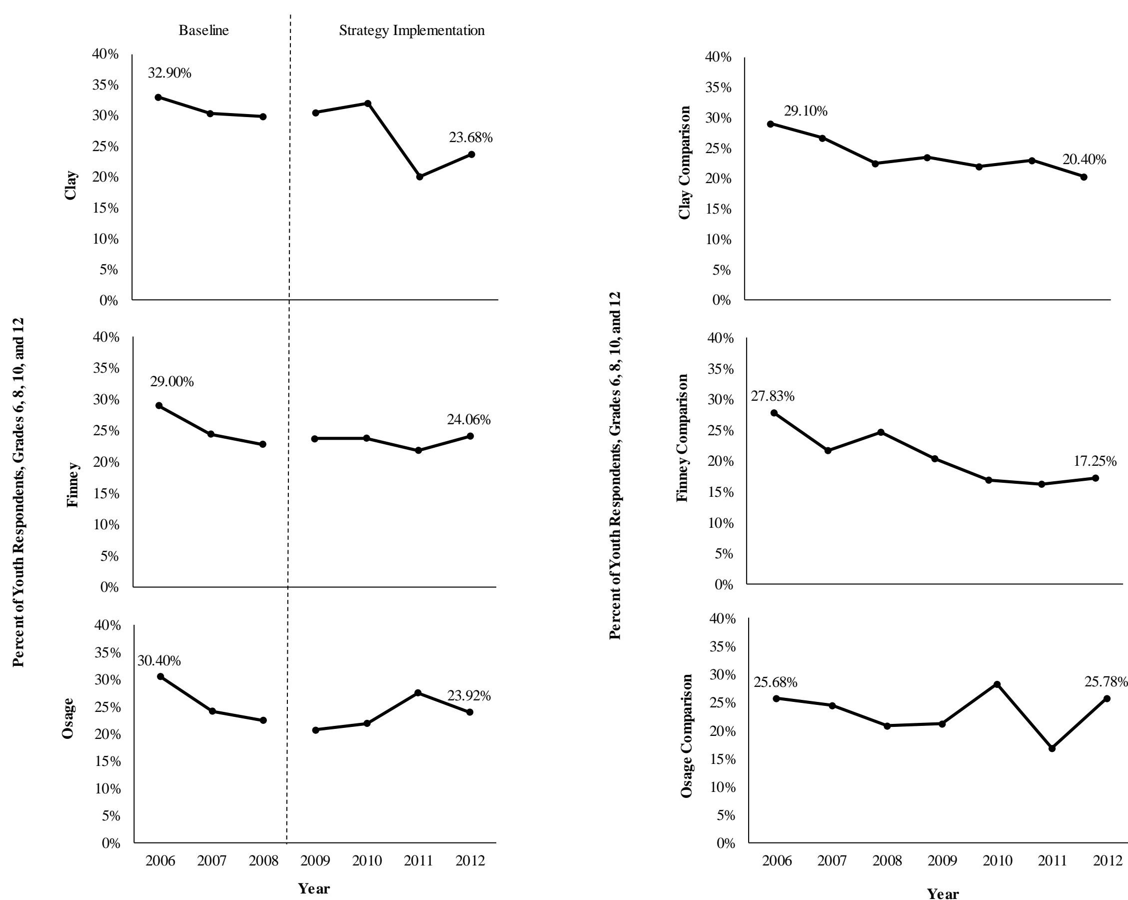

Figure 12. Percent of youth reporting receiving alcohol from adults. The data show the percent responses from Kansas youth in the study communities that prioritized social access as an influencing factor.

Independent samples *t*-tests were used to examine differences between the intervention and matched comparison groups in the percentage of youth reporting having received alcohol from adults in 2006 and 2012. In 2006, there was no significant difference between the two groups in the percentage of youth reporting having gained access to alcohol from adults, $t(4) = -2.13$, $p = .100$, $d = 1.74$. In 2012, however, the intervention group showed a significantly lower percentage of youth reporting having social access to alcohol than the comparison group, $t(2) = -4.67$, $p = .042$, $d = 3.81$.

Dependent samples *t*-tests were used to analyze whether statistically significant differences existed in both the intervention group and the comparison group between 2006 and 2012 regarding social access outcomes. In the intervention group, there was a significant reduction in youth reporting obtaining alcohol from adults, $t(2) = 5.497$, $p = .032$, $d = 4.92$. In the comparison group, there was also a significant reduction in social access outcomes, $t(2) = 10.262$, $p = .009$, $d = 4.86$. Taken together, the findings indicate that while there was a significant reduction in the percentage of youth reporting receiving alcohol from adults over time, the intervention group reported a statistically significant reduction in social access outcomes compared to the matched comparison group.

Enforcement. The results indicate improvements in enforcement in the intervention communities (Figure 13). Overall, the mean baseline percentage of youth reporting not being caught by police for using alcohol was 70.24% ($SD = .03$), whereas the mean percentage in the intervention condition was 66.32% ($SD = .03$). The intervention communities also showed improvements in outcomes compared to 2006 measures. Nemaha County showed the greatest percent decrease from 2006 reported enforcement outcomes with a 23.48% reduction in 2012, whereas Finney County reported a 1.06% decrease during the same period.

Comparison communities also reported improvements in enforcement outcomes between 2006 and 2012. While the intervention communities reported an overall an 11.50% mean reduction in youth reporting not being caught by police for underage drinking relative to the baseline mean, the comparison communities reported a 28.46% reduction in outcomes. The Finney County comparison community showed the greatest improvement in enforcement outcomes. In 2006, almost one out of five youth (19.80%) in the Finney County comparison community reported not being caught by police for underage drinking; in 2012, the prevalence was reduced by 44.75% compared to the baseline year. The Osage County comparison community showed the smallest reduction in enforcement outcomes across the comparison communities, reporting only a 13.54% reduction from a 2006 baseline prevalence of 17.35%.

A two-way (intervention group × time) repeated measures ANOVA was conducted to examine differences over time in the number of youth reporting not getting caught by law enforcement for consuming alcohol. The omnibus ANOVA *F* test revealed no statistically significant difference in the percent of youth report not getting caught for drinking alcohol between the intervention and matched comparison communities over time, $F(6,3) = 3.33$, p .176, $\eta_p^2 = .87$. There was no statistically significant difference in outcomes between the intervention and comparison communities, $F(1,8) = .338$, $p = .577$, $\eta_p^2 = .04$. Further analyses of the omnibus ANOVA revealed that with respect time alone, there was a significant reduction in enforcement outcomes, $F(6,48) = 8.63$, $p < .001$, $\eta_p^2 = .519$. However, there was no statistically significant difference in outcomes between the intervention and comparison communities, $F(6,48) = .616$, $p = .72$, $\eta_p^2 = .071$.

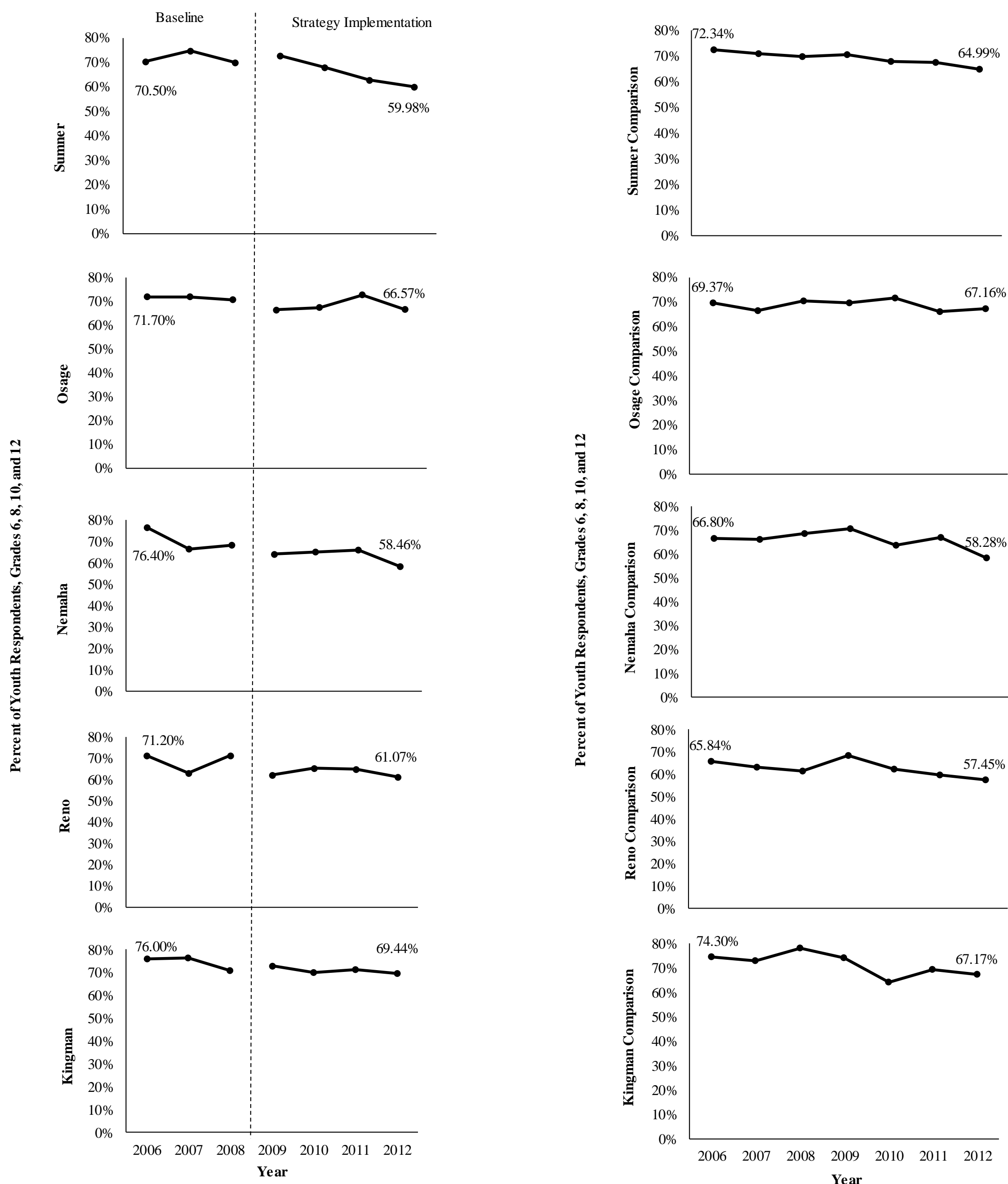

Figure 13. Percent of youth reporting "not getting caught" by law enforcement. The data show the percent responses from Kansas youth in the study communities that prioritized social access as an influencing factor.

Given the statistically significant differences over time, a pairwise comparison post-hoc test with a Bonferroni adjustment was conducted on enforcement outcomes by study year. The post-hoc analyses showed a statistically significant difference in prevalence between each of the

baseline years (i.e., 2006 – 2008) and 2012. Table 14 shows the study years, mean differences, and significance level for each pairwise comparison indicating a statistically significant difference.

Table 14

Pairwise Post-hoc Analysis for Percentage of Youth Reporting Not Getting Caught Drinking Alcohol over Time

Comparison Years	Mean Difference	*p*	Cohen's *d*
2006 vs. 2012	8.388	.003	2.08
2007 vs. 2012	6.159	.028	1.34
2008 vs. 2012	6.919	.011	1.62

Note. Statistical significance was examined at the $\alpha = .05$ level.

Motor vehicle injuries and fatalities. Alcohol-related motor vehicle injuries were used as a collateral measure of the intervention's effects. Figure 14 shows the percentage of alcohol-related motor vehicle injuries involving youth from 2007 – 2012. A total of 179 alcohol-related injuries and fatalities involving youth were reported across intervention communities from 2007 – 2012. There was a mean increase from 2007 – 2009 in rates of reported injuries and fatalities, from 13.41% ($N = 24$) of all reported instances in 2007 to 26.26% ($N = 47$) in 2009. However, there was a substantial decrease from 2009 – 2012 in reported rates of injuries and fatalities, with 2010 – 2012 mean rates returning to 2007 levels. The findings also indicate differential rates across communities. Four of the seven intervention communities (i.e., Finney, Kingman, Osage, and Reno) reported increased rates in the baseline condition; of these communities, Kingman and Reno showed decreases in the first year in which the intervention was implemented.

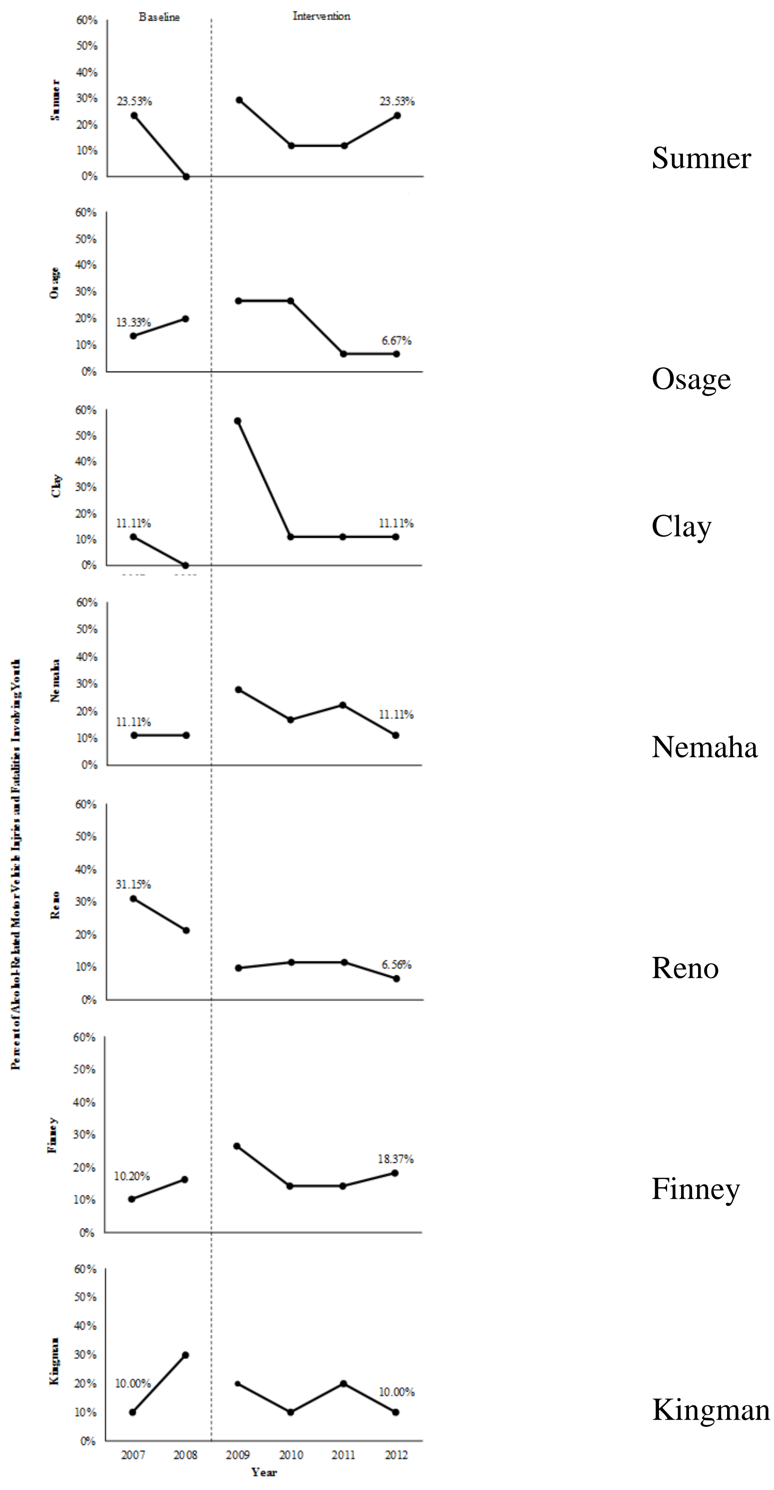

Figure 14. Rate of alcohol-related motor vehicle injuries and fatalities involving youth, 2007 – 2012.

Discussion

Increasing Community Capacity to Support Prevention Efforts

The present study examined coalition capacity building through improvements in community readiness to support the implementation of prevention efforts. Of the six dimensions of community readiness, intervention communities showed greatest improvements in community efforts related to the planning and implementation of community changes. Prior to implementing the SPF model, the majority of intervention communities reported a clear recognition that underage drinking was a problem behavior affecting their communities. However, there were not many concentrated activities directed toward addressing alcohol consumption among youth. Findings from the intervention condition suggest that a majority of the intervention communities reported both increased knowledge and implementation of evidence-based prevention strategies related to improving underage drinking outcomes post-intervention.

The smallest mean improvement in community readiness was related to community climate. Specifically, partner coalitions indicated that the communities identified underage drinking as a general concern; however, there was a lack of motivation among the community members to take action to reduce the prevalence of underage drinking. Results from the intervention condition suggest that while the community climate only increased by one stage, the implementation of evidence-based strategies (e.g., TeenThinking, Advocacy and Education) may have contributed to increasing the awareness of consequences related to underage drinking. The increase in awareness may have also contributed to increased participation in coalition activities, as suggested by participant findings from the Collaboration and Capacity Survey. Moreover, it is plausible that coalitions' efforts in the intervention condition addressed personal factors among community members, particularly the increase of knowledge and skills. There was a general

recognition that the community climate, socially accepted behaviors, and prevailing attitudes may create conditions for underage drinking to occur and prevention efforts should address the antecedents of the problem behavior. In the SPF context, these antecedents may include advocacy-related efforts to bring attention to the problem of interest, as well as engaging in functional assessments and disseminating the findings to key stakeholders.

Overall, the intervention communities reported improvements in community readiness, which were moderately associated with the number of coalition-facilitated community changes. The types of development activities facilitated such as collaborative meetings with partners across multiple sectors of the community may have enhanced community readiness and promoted increased knowledge, awareness and participation in community efforts. Previous research has described the utility of multisectoral collaborative efforts to support both the implementation of evidence-based strategies and the facilitation of community changes to improve outcomes (Anderson-Carpenter et al., 2014; S. Fawcett, Schultz, Watson-Thompson, Fox, & Bremby, 2010; Lawthom, 2011; Zakocs & Edwards, 2006).

In addition, the coalitions participated in training and technical assistance, which has been consistently shown to enhance coalition capacity and functioning in prevention efforts (Nargiso et al., 2013; Riggs et al., 2008; Schultz, Pandya, Sims, Jones, & Fischer, 2013; Watson-Thompson et al., 2013). The moderate association between overall community readiness, particularly for the community efforts dimension, and facilitated community changes may suggest that the coalition and community partners increased their capacity to support program, policy and practice changes may suggest that coalition and community partners increased their capacity to support program, policy, and practice changes. The intervention communities showed an overall improvement in community readiness from Vague Awareness of underage drinking

prevalence in the local communities to Preparation through active community support for improving current prevention efforts. Prior to implementing their evidence-based strategies, partner coalitions reported that motivation to address underage drinking in their communities was lacking, despite an existing and recognized problem. In the intervention condition, however, coalitions planned for and established partnerships with multiple collaborative sectors, which supported the coalitions' capacity and buy-in to support prevention efforts to address underage drinking.

The findings from this study are consistent with previous research in improving community readiness for change (Ogilvie et al., 2008). The empirical literature has generally demonstrated a 0 – 2 stage improvement in community readiness; in the Ogilvie et al. (2008), community readiness in Alaskan communities ranged from Denial/Resistance to Preplanning. In the present study, communities reported a 1 – 3 stage improvement in community readiness for change. Unlike previously published research in community readiness, communities in the present study had a comprehensive prevention support system at the state level, which may have provided the infrastructure necessary to support capacity building and technical assistance necessary to improve community readiness for change. This infrastructure provided the resources and contingencies necessary to improve readiness for change at the community level through supports to build coalition capacity to support change and improvement.

Number and Type of Community Activities

In the intervention condition, partner coalitions facilitated 351 community changes in supporting the implementation of evidence-based strategies. In examining the distribution of community changes by type, there were substantially more program and practice changes than policy changes. In the first year of implementation, the state prevention team

observed an imbalance of selected evidence-based programs compared to environmental strategies, which was a limitation of the State Incentive Cooperative Agreements (SICAs) that preceded the SPF. In response to the imbalance, the state prevention team worked with partner coalitions through training and technical assistance to identify environmental strategies, which support policy changes. Implemented policy changes are often more sustainable than program or practice changes in that they have a wider reach and can function with little to no effort on the part of policy makers (Mittlemark, Hunt, Heath, & Schmid, 1993).

There are additional considerations that may explain the relative lower percentage of implemented policies compared to programs and practices. First, policy changes require a more complex chain of behaviors in which coalitions must engage, including establishing and maintaining partnerships, mobilizing community members, and obtain support from key stakeholders. Second, manipulating antecedents of underage drinking through policy changes change takes a longer time to facilitate, particularly given the effort and community engagement required to successfully support these changes. Facilitating policy change may span multiple years, from policy development to approval, to implementation. Thus, it is likely that some action steps identified as not completed by partner coalitions may have been policy changes.

In this study, more than one-third of the total number of community changes occurred in 2009. These changes primarily consisted of new programs being implemented in multiple locations within a given community. For example, each instance of Strengthening Families being implemented at a new location, such as a school or church, within the community was considered a new practice change. Additionally, there was a marked increase in the rate of community changes from 2011 – 2012. These documented community changes consisted of more collaborations between community sectors in preparation for sustaining the coalitions’

efforts after the intervention ended. Through training and technical assistance, coalitions were guided by the state prevention team to better balance the number of implemented evidence-based programs with environmental strategies.

From the third quarter of 2010 through the first quarter of 2011, there were relatively fewer community changes implemented across coalitions. This may have been due to weather conditions affecting the implementation of new programs. In 2010, Kansas experienced an unusually cold winter. Because of larger amounts of snow and ice compared to previous years, some of the planned community changes had to be postponed until the second or third quarter of 2011. In some cases, planned program implementation had to be postponed because the temperatures were so low that it may have prevented members from participating in those programs.

The differential rates of implemented community changes across the intervention communities may be due to a number of contextual factors. Partner coalitions in Sumner and Finney Counties showed the highest rates of facilitated community changes, which were supported by multiple established partnerships with community sectors. The Sumner County Community Drug Action Team, for example, actively recruited representatives from multiple sectors to serve on the board of directors. The Community Health Coalition of Finney County also collaborated with community sectors to implement evidence-based strategies at new sites across the county. Because Finney County has a diverse demographic population, some of the coalition's facilitated community changes were directed toward supporting culturally competent implementation of evidence-based strategies and related efforts. In particular, the Community Health Coalition of Finney County not only translated program materials to serve the Spanish-speaking population, but it also hosted underage drinking related workshops to Burmese and

Somali refugees in 2011. For Finney County, this series of workshops represented the first time the coalition engaged in the new practice of providing information and enhancing skills for populations that may not the predominant languages spoken within the county (i.e., English and Spanish).

Some communities experienced transitions in staff or key partners, which may explain lower rates of facilitated community changes. In 2011, the Clay Counts Coalition reported the hiring of a new coalition grant coordinator and the election of a new mayor of Garden City. The time needed to acclimate the new grant coordinator to the coalition's activities, as well as efforts to garner support from newly elected leaders may have hindered the rate at which community changes could have been facilitated by the coalition. The United 4 Youth of Nemaha County coalition also reported transitions in sector representatives in 2011, which may have affected the rate at which the coalition could have facilitated the implementation of new programs, policies, and practices.

Sustaining Community Changes

The findings from the present study suggest that multiple factors support the maintenance of community-level changes. The most commonly noted factor in supporting sustainability was establishing and maintaining partnerships with community sectors. The reinforcing effects of establishing partnerships during the intervention condition created conditions for community sectors to provide financial, human, and material resources to the partner coalitions. Particularly, the United 4 Youth of Nemaha County used the established partnership with the local government sector to petition for and receive additional funding to sustain its implemented evidence-based strategies and community changes. Additionally, the coalition has partnered with community sectors (e.g., schools) to support the sustainment of community changes.

In addition to maintaining established partnerships, each community established new collaborations to sustain its prevention activities. The Reno County Communities That Care Coalition formed partnerships with the local homeless shelter and sexual assault center to support the sustainability of its evidence-based programs, and the community's youth supported the sustainability of its environmental strategies. The Sumner County Community Drug Action Team reported that in addition to partnering with youth to engage in sustainability efforts related to its environmental strategies, it also formed a key collaboration with the Juvenile Justice Authority through a mini grant. The United 4 Youth of Nemaha County began to heavily collaborate with community youth to sustain its efforts; the community coalition allows youth to set the coalition's agenda and direction.

The communities also cited impeding factors to sustaining efforts, such as transitions in leadership and attrition of coalition champions. In Sumner County, there was a high personnel turnover in the school district, which was a key partner in implementing evidence-based programs. Particularly, the coalition representative indicated that between 2012 and 2013, 24 teachers resigned from their positions in the district, the assistant superintendent resigned, as well as the principal and vice principal at the local high school. These resignations were, in large part, influenced by insufficient funding to the school district that was below the Kansas state guidelines. However, recent efforts by the Kansas state governor and the state legislature suggest that state-level stakeholders in education are working to increase financial support to appropriate levels for the school district. Other key positions experienced transitions since the conclusion of the intervention. In addition to experiencing a change of sheriffs and police chiefs, the Sumner Regional Medical Center's president, who was a founder of the intervention coalition, resigned

his position. Moreover, a city council member, who was a key supporter of the coalition's efforts, moved to Colorado after the intervention ended.

Previous research has elucidated the importance of financial resources in maintaining coalition functioning (Israel et al., 2006). Each of the three community coalition representatives reported receiving financial support from diverse community sectors; however, the support varied between communities. In Reno County, the juvenile justice sector donated a total of $20,000 to support the local coalition's efforts, and the Sumner County school district donated $1.00 to the local coalition for every student in the district. United 4 Youth of Nemaha County reported the greatest amount of financial support from the community. In addition to receiving a $1,000 grant from the Kansas Department of Health and Environment to sustain its work, the coalition receives 20% of the total liquor tax collected in Nemaha County to support its efforts. Moreover, the Nemaha County local government provided the coalition with additional financial resources as needed.

Level of Action Plan Completion

Overall, the partner coalitions completed a majority of their developed action plans. However, there was variation in the percentage of total action steps completed. Specifically, while several partner coalitions completed all of their action steps, Clay Counts Coalition and the Community Health Coalition of Finney County showed the lowest percentage of completed action steps. These two coalitions also had very different levels of implementation of evidence-based strategies as compared to the other five counties. Clay County implemented two programs, which was the least and number of strategies implemented. The Coalition also experienced leadership transitions in the SPF coordinator during the middle of the program. Whereas, Finney County identified the most evidence-based strategies (n=10) to implement locally, but also

experienced the loss of the SPF coordinator in the middle of the grant. The lower percentage of action plan completion compared to the number of implemented strategies may suggest that implementing too many or too few strategies can be problematic. Furthermore, a comparison to coalitions that completed all of their identified action steps suggests that a feasible number of evidence-based strategies that can be implemented is between three and four, using a combination of both evidence-based programs and environmental strategies. Also, conditions such as maintained leadership is seemingly critical to supporting implantation of action plans.

The implementation of action plans within the study communities supported coalition efforts in facilitating community changes and environmental strategies. The findings indicate that coalitions that implemented all of their identified action steps also facilitated more community changes. It must be noted that while the Community Health Coalition of Finney County implemented more than 80% of its action plan by the end of the intervention period, it facilitated 53 community changes and had not started implementing more than 12% of the action plans. These findings may be due to the number of evidence-based strategies the coalition identified for implementation. While the remaining communities supported between two and four evidence-based strategies, the Community Health Coalition of Finney County implemented 10 strategies. Thus, the coalition may not have had the resources to support the implementation of each of its identified evidence-based strategies or resulting planned community changes.

The findings are consistent with previously published research on the effects of implementing strategic and action plans. For example, early development and implementation of action plans have been shown to support coalitions' efforts in occasioning community changes related to identified goals and objectives has been shown to support the empowerment of communities and facilitate the implementation of community changes (Fawcett et al., 1997;

Watson-Thompson, Fawcett, & Schultz, 2008). Additionally, action planning can support the sustainability of implemented community changes (Blair, 2004).

Underage Drinking Outcomes

The study showed mixed findings with respect to the implementation of community changes within the Strategic Prevention Framework to improve past 30-day use and influencing factor outcomes. The study's findings suggest that facilitated community changes resulted in statistically significant reductions in underage drinking outcomes in the intervention communities, with medium to large effect sizes reported. However, there were no statistically significant differences between the intervention and comparison communities with respect to improvements in underage drinking outcomes. While both the intervention and comparison groups showed reductions in past 30-day use, the intervention group demonstrated more substantial improvement in outcomes. The intervention communities also showed overall improvement in reported alcohol-related motor vehicle injuries and fatalities involving youth, with 2012 reported rates at or below the 2007 rates of injuries and fatalities.

Within the intervention communities, there were differential rates of improvement in past 30-day use outcomes, which are interesting in the context of findings from the Community Readiness Survey. In particular, although Osage County showed the most substantial improvement in community readiness for change; it did not show the most substantial reductions in past 30-day use. An analysis of action plan implementation revealed that although the Community Health Coalition of Finney County supported 10 evidence-based strategies to address underage drinking and related influencing factors, it showed the least improvement in past 30-day use outcomes. Two factors may explain the findings. First, the Community Health Coalition of Finney County identified substantially more evidence-based strategies for

implementation than any other intervention community, which may have diluted the degree to which the comprehensive intervention could have been diffused and fully implemented in the community. Second, less than one-fourth of its evidence-based strategies were environmental strategies.

There were also improvements in outcomes in the matched comparison communities, but the improvements were not as substantial. There are several explanations for the observed findings. Improvements in the comparison communities may have been influenced by statewide prevention efforts to reduce underage drinking, such as the Sticker Shock and statewide media campaigns. It is possible that some cross-diffusion of intervention effects occurred. For instance, one county intentionally increased car stops for alcohol on roads bordering the county line to minimize displacement effects (e.g., youth now partying in the next county after stricter enforcement in a neighboring county). In the context of implementing comprehensive community interventions, however, state prevention systems may find the diffusion of intervention effects not only appropriate, but also desirable to improve health outcomes among youth.

The findings also indicated improvements in outcomes related to social norms, social access, and enforcement of underage drinking laws in the intervention communities. There were marked improvements in social access and enforcement outcomes, but the improvements related to social norms were not as substantial. The smaller improvement in social norms outcomes over time compared to social access and enforcement may be due to the characteristics of social norms. Specifically, social norms consist of complex behaviors, interlocking contingencies, and reinforcers (e.g., values) within a community. In addition, providing alcohol to youth and the enforcing existing underage drinking laws may be influenced by the current values within the

community's culture. Given the nature of social norms in relation to social access and enforcement, it may take more time and more substantial improvements in social access and enforcement outcomes to change the behaviors, contingencies, and reinforcers (i.e., norms) related to underage drinking in communities.

The partner coalitions worked closely with local police departments to identify activities in their action plans to support the enforcement of existing alcohol consumption laws within the communities. These efforts resulted in communities reporting overall marked improvements in motor vehicle injuries and fatalities outcomes over time. Notably, in 2006, none of the intervention communities reported collaborating with law enforcement groups. However, in 2012, each community indicated an established partnership with the local police department. In addition, the partner coalitions worked closely with local police departments to plan activities to support the enforcement of existing alcohol consumption laws within the communities. Through the collaborative efforts and action plan implementation, coalitions and law enforcement agencies were able to coordinate activities through environmental strategies (e.g. Saturation Patrols) to enforce seatbelt and underage drinking laws through tickets, citations, and arrests.

Study Strengths

The present study provided an empirical analysis of coalition efforts to increase community readiness for change. This study also examined the contribution of collaborative action with community sectors to enhance community readiness for change. Through the study, readiness for change was examined in relation to actual implementation of prevention activities (i.e., program, policy, and practice changes) occurring in the community, which is an advance to begin to understand perceptions and actual implementation of change in the community.

Another salient strength of the present study is its measurement of implementation of the Strategic Prevention Framework to better understand its effectiveness. Although the model is commonly used to address community-level problems such as underage drinking and HIV/AIDS, and has applicability to violence prevention, there are few published studies that examine effect sizes of observed differences. Moreover, relatively little research has been published that measures the Strategic Prevention Framework's effects on influencing factors of underage drinking and secondary measures such as alcohol-related motor vehicle injuries and fatalities. Additionally, the study used a mixed-methods approach to examine the number and types of facilitated community changes over time. Although much of the substance abuse prevention literature examines the effects of community interventions on outcomes, modest studies have further probed for the sustainability of coalition efforts. Analyzing the contexts and conditions that support sustained effects is becoming more important as financial support for coalitions' efforts becomes more limited.

One of the most salient strengths of the present study is that it used a quasi-experimental design to examine changes in underage drinking outcomes. Much of the research related to community-based interventions addressing substance abuse outcomes makes substantial use of pretest-posttest designs. These designs do not allow for the examination of the intervention's effects on outcomes throughout the implementation period. The interrupted time series with replications design used in the present study allows for an analysis in behavioral trends both within and across experimental conditions. Moreover, the addition of a matched comparison group provided an added strength to the study by integrating the characteristics of both the time series design and the nonequivalent control/comparison group design. Particularly, the research design used in the present study minimized threats to internal validity, such as regression toward

the mean, mortality, history, maturation, and selection biases. Moreover, the use of Kansas youth in grades 6, 8, 10, and 12 as a representative student sample minimizes threats to external validity. Because the youth who participated in the Communities That Care Survey were students at area school districts, they may have been more representative of the demographics within the local communities, thus increasing the degree to which the study's effects can be generalized across Kansas youth.

Study Limitations

While the present study contained a number of strengths, there were also limitations in implementing the intervention and measuring its effects. First, while efforts were made to collect permanent products of documented coalition activities (e.g., meeting minutes, written policies, newspaper articles), it is possible that not all coalition efforts related to development activities, community changes, services provided, and media coverage were documented completely in the Online Documentation and Support System (ODSS). Thus, it is possible that the findings are based on an underestimation of the coalitions' efforts to enhance capacity and facilitate community changes. Second, it is not certain that the individuals who completed both the Community Readiness Survey and the Collaboration and Capacity Survey during the baseline condition were the same persons who completed the surveys in the intervention condition. Although the state prevention team attempted to assure the same individuals who completed the baseline survey also participated in the survey during the intervention condition, the limitation may have been due to attrition in coalition membership over time.

Third, while the study used a matched comparison group, randomization was not used to assign communities to study conditions (i.e., intervention or no intervention). Thus, causal inferences between the independent and dependent variables may be limited. A fourth limitation

that the sustainability findings were based on only three of the seven intervention communities. Although multiple efforts were made to identify and contact coalition members via telephone and email who were not only part of the coalition during the intervention, but also willing to participate in the interviews, most attempts were not successful due to transitions in leadership post-intervention. Because of the lower sample size, the findings regarding sustaining community changes and evidence-based strategies cannot be generalized across all seven communities.

While the Kansas Communities That Care Survey is a widely-used and validated instrument, the data are based on youth self-reported behavior. Thus, there is a possibility of reactive measurement bias. Finally, with respect to community-level indicator data, 2006 data were not available from the Kansas Department of Transportation regarding motor vehicle injuries and fatalities. Thus, it is difficult to establish a clear trend in the baseline condition across communities, or to determine whether the trends were stable prior to implementing the intervention.

Study 1 Conclusion

The present study demonstrated the effects of the Strategic Prevention Framework as a comprehensive community intervention to address underage drinking in seven Kansas communities. The findings show that enhancing coalitions' knowledge, skills, and resources to address their goals can facilitate community-level changes and improvements in underage drinking outcomes. In addition, the study shows multisectoral collaboration and partnerships can support the sustainability of implemented community changes over time.

The Substance Abuse and Mental Health Services Administration (SAMHSA) has provided millions of dollars in grant funding to state prevention systems over the past 10 years to

support substance abuse prevention efforts. At the community level, harmful behaviors and associated adverse conditions occur in the context of interlocking contingencies across multiple socioecological levels. Given the context and conditions in which such behaviors occur, coalitions often use multicomponent interventions that use both evidence-based programs and environmental strategies to effect change. By examining coalition efforts and activities that increase capacity to facilitate community-level changes to support improvements in outcomes, both scientists and practitioners can develop and implement effective interventions that are both culturally appropriate and sustainable over time.

Study 2 Method: Analyzing the Association between Intervention Intensity and Underage Drinking Outcomes

Design and Measures

The present correlational study measured the intensity of implemented community changes which were defined as new or modified programs, policies, and practices that were facilitated by coalitions and related to their goals (Table 15). Documenters from each community coalition documented discrete coalition activities in an online system and scored whether the activity was a community change. Then, each activity was independently scored by two academic researchers for consistency in content and characterization. Each entry was scored according to a codebook, which included both definitions and scoring instructions to determine whether documented activities were community changes or another type of activity. A two-tailed Pearson correlation analysis was used to examine the degree to which the intensity of intervention implementation are associated with past 30-day alcohol consumption outcomes in youth.

Calculating Intensity Scores

The documented community changes were characterized by intensity dimensions related to the duration of community change efforts (i.e., one-time event, occurring more than once, or ongoing), the type of behavior change strategy used (i.e., providing information and enhancing skills; modifying access, barriers, and opportunities; changing the consequences; enhancing services and supports; and modifying policies and broader systems), and the priority population reach of the community change (i.e., the categorized proportion—high, medium, low—of the prioritized population experiencing the implemented community change).

Table 15

Study 2 Description of Dissertation Research Questions and Related Measures

Dissertation Research Question	Independent Variable and Measures	Dependent Measures
Are there associations between rates and intensity of community changes and underage drinking related outcomes in the study communities?	Rate and Intensity of Community Changes Recorded in the ODSS	**Primary Measures:** Past 30-day Use (Kansas CTC Survey. "On how many occasions (if any) have you had beer, wine, or hard liquor in the past 30 days?") Influencing Factors Of Underage Drinking (Kansas CTC Survey data related to Social Norms, Social Access, and Enforcement) **Secondary Measure:** Alcohol-Related Motor Vehicle Injuries. Number of annual motor vehicle injuries related to underage drinking, 2007 – 2012 (Source: KDOT)

Note. ODSS = Online Documentation and Support System. CTC = Communities That Care. KDOT = Kansas Department of Transportation

Each intensity dimension was assigned a weight based on the potential strength of the community change. Low-intensity dimensions received a weight of 0.1, medium-intensity dimensions were weighted as 0.55, and high-intensity dimensions were weighted as 1.0 (Appendices H and I).

The composite intensity score for each community change was calculated by adding the dimension scores for each change. Therefore, the theoretical ranges for the intensity of a community change ranged from 0.3 (i.e., low intensity for reach, duration, and behavior change strategy) to 3.0 (i.e., high intensity for reach, duration, and behavior change strategy). After calculating the composite intensity score for each community change, the overall intensity score for each community coalition's efforts was calculated by summing the intensity scores for all community changes for a given year. Finally, the annual intensity scores were added together to obtain an overall intensity score representative of the coalitions' efforts throughout the implementation period.

The intensity scores for each coalition were summed to create a composite score for each year, and each annual score was added to calculate an overall implementation intensity score for the intervention community. To allow for more direct comparisons across communities, overall intensity scores for each community were standardized on a scale from 0 to 1 to create an index. Standardized scores were calculated by subtracting the smallest overall intensity score from the individual community's score. This quantity was then divided by the difference between the largest and smallest overall intensity scores.

Interobserver agreement. Interobserver agreement was based on scoring of dimensions of community change intensity by two independent coders from The University of Kansas Work

Group for Community Health and Development. A primary observer in the KU Work Group independently scored all documented coalition efforts. Then, approximately 50% of entries were uniquely scored by another KU Work Group observer for agreement. Agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements. Then, the quantity was multiplied by 100%. Acceptable minimum interobserver agreement was established at 80% or more.

Results

Interobserver agreement procedures were conducted for 55% of all scored dimensions of community change intensity. The mean interobserver agreement was 91.8% (*Range* = 89.3% - 96.7%). The intervention communities implemented a total of 351 community changes (i.e., new or modified programs, policies, and practices) from January 1, 2009 – June 30, 2012. The mean raw intensity score across communities was 36.7 (*SD* = 31.69), with raw intensity scores ranging from 10.05 in Clay County to 106.65 in Sumner County. Table 16 shows illustrative examples of documented community changes, categorized by duration, strategy, and reach. In addition, the overall intensity score is presented for each example. The composite annual intensity score for each intervention year is presented, followed by the summed raw intensity score and the standardized intensity score.

Table 16

Illustrative Community Changes and Intensity Scoring for Intervention Communities, 2009 – 2012

Community	Documented Community Change	Community Change Characteristics			
		Duration	Behavior Change Strategy	Reach	Raw Intensity Score
Reno	CMCA strategy team partnered with ABC and the Tobacco Prevention Coalition in Reno County to provide server training for tobacco and cereal malt beverages.	Medium (More than Once)	Low (Providing Information)	Low (≤ 5% of population)	0.75
Sumner	Families who are court ordered to attend parenting classes were approved to enroll in the Strengthening Families program.	High (Ongoing)	High (Modifying Policies)	Low (≤ 5% of population)	2.1
Kingman	For the first time, a billboard on underage drinking was placed on the east edge of the City of Kingman.	High (Ongoing)	Low (Providing Information)	High (≥ 21% of population)	2.1

Note. CMCA = Communities Mobilizing for Change on Alcohol. ABC = Alcohol and Beverage Control.

Figure 15 shows the number of implemented community changes for each community followed by past 30-day use outcomes. The stacked bars indicate the cumulative intensity of implemented community changes from 2009 – 2012 for each intervention community, with each shaded bar denoting the unstandardized intensity score for the corresponding year. Thicker shaded bars indicate a higher annual intensity score, with thinner bars representing lower intensity scores. The mean raw intensity score across intervention communities was 36.73, with raw scores ranging from 10.05 – 106.65 ($M_{standard}$ = .28, $SD_{standard}$ = .33).

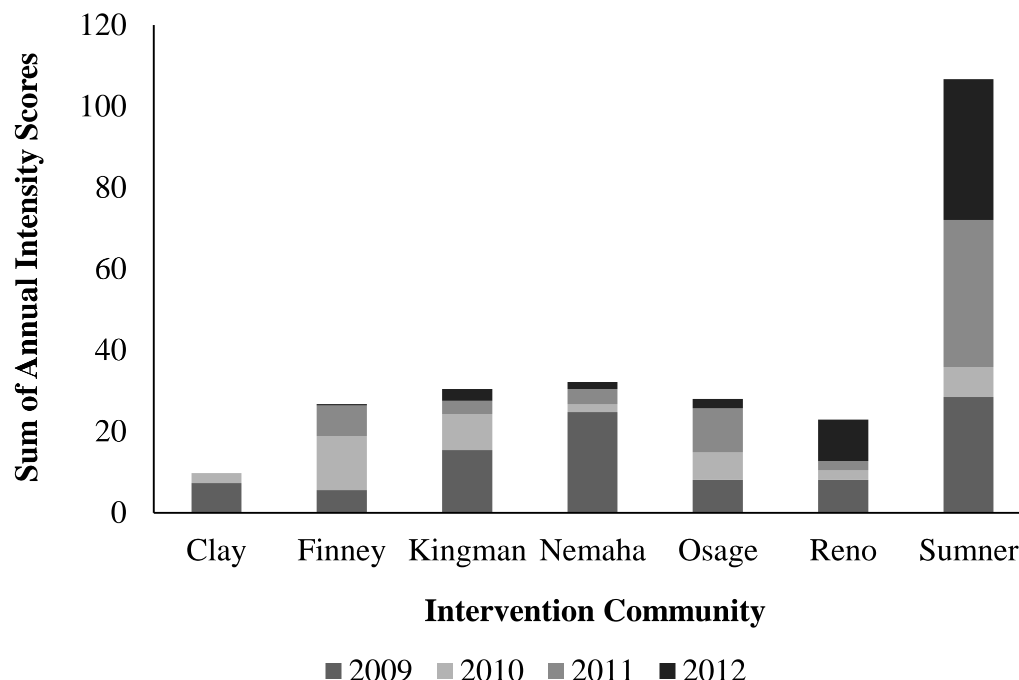

Figure 15. Cumulative intensity of implemented community changes for intervention communities, 2009 – 2012.

Table 16 shows the intensity scores for past 30 day use outcomes for the intervention communities. The composite annual intensity score for each intervention year is presented, followed by the summed raw intensity score and the standardized intensity score. In addition, Table 17 shows the number of implemented community changes for each community followed by past 30-day use outcomes. The mean raw intensity score across intervention communities was 36.73, with raw scores ranging from 10.05 – 106.65 ($\bar{X}_{standard}$ = .28, *SD* = .33). Overall, communities showed a decrease in the intensity level of community changes over time, with mean annual raw intensity scores decreasing from 17.90 in 2009 to 6.14 in 2012.

Table 17

Intensity Scores and Past 30-Day Use Outcomes for Intervention Communities

Intervention Community	2009 Intensity	2010 Intensity	2011 Intensity	2012 Intensity	Total Intensity	Standard Intensity	Number of Community Changes	2007 30-Day Use (%)	2012 30-Day Use (%)	% Change 30-Day Use
Clay	7.35	2.4	0	0.3	10.05	0.00	16	35.6	24.4	-31.46
Finney	5.55	13.35	7.5	0.3	26.7	0.17	53	34.1	24.7	-27.57
Kingman	15.45	8.85	3.3	2.85	30.45	0.21	25	41.3	27.8	-32.69
Nemaha	24.75	1.95	3.75	1.8	32.25	0.23	46	39.7	23.6	-40.55
Osage	8.1	6.75	10.8	2.4	28.05	0.19	44	31.1	21.8	-29.9
Reno	8.1	2.4	2.25	10.2	22.95	0.14	37	24.7	19.4	-21.46
Sumner	28.5	7.35	36.15	34.65	106.65	1.00	130	36.1	19.2	-46.81

Figure 16 shows a scatterplot of the standardized intensity score and the percent reduction in past 30-day use. A two-tailed Pearson correlation analysis showed a moderately strong and statistically significant relationship between the intensity of implemented community changes and percent reduction in past 30 day use, $r(6) = .773$, $p = .042$. Sumner County showed the greatest number of community changes ($N = 130$) and showed the greatest percent reduction in past 30-day use. However, while Clay County showed the lowest standardized intensity score, it showed the fourth-greatest percent change in reductions of past 30-day use among youth.

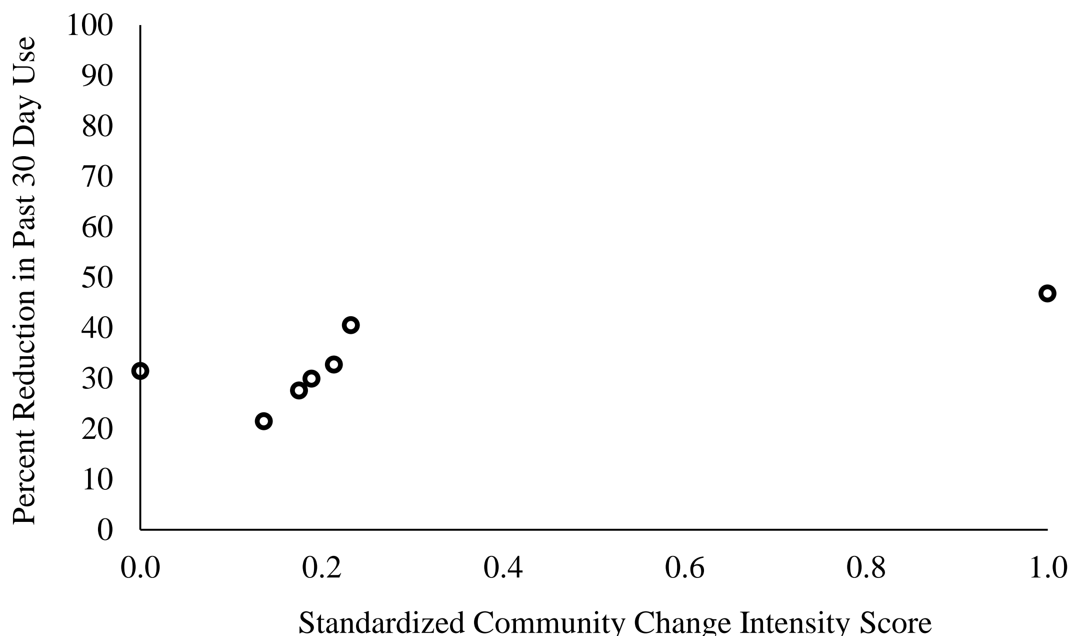

Figure 16. Standardized intensity scores and past 30 day use outcome.

Discussion

The study findings demonstrate the cumulative intensity of implemented community changes and their relationship to improvements in underage drinking outcomes. While the findings demonstrated a strong positive correlation between intensity score and percent reduction in past 30-day use, the correlation was not perfectly linear. For example, the Clay Counts Coalition showed the lowest standardized intensity score for implemented community changes. However, Reno County reported the smallest percent reduction in underage drinking outcomes. One possible explanation for the finding is that Reno County indicated the lowest percentage of youth reporting past 30-day use in 2006, whereas Clay County reported the fourth-highest percentage of past 30-day use during the same year. Moreover, Reno County Communities That Care Coalition reported a greater number of facilitated community changes in 2011 and 2012 than the Clay Counts Coalition, which may explain the differing intensity scores between the two communities. The results also indicate that the Sumner County Community Drug Action Team

reported substantially more facilitated community changes and greater improvements in past 30-day use outcomes than the other coalitions. In addition, the Sumner County coalition showed higher intensity scores for most of the intervention years in relation to other coalitions. The findings from Sumner County, as well as the generally linear trend of the remaining communities' intensity scores, suggest that implementing community changes with longer duration, greater reach, and stronger behavior change strategies (e.g., changing consequences, modifying polices and broader systems), are strongly associated with improvements in underage drinking outcomes.

This exploratory study is one of the first to systematically examine the association between the intensity of community changes and reductions in adolescent substance abuse prevention outcomes (e.g., past 30-day alcohol consumption). Findings from the study show a strong positive correlation between intensity scores and improvement in underage drinking outcomes. Previous research in measuring the intensity or impact of interventions on identified outcomes have been in tobacco cessation (Abrams et al., 1996), public health and health promotion (Glasgow et al., 1999), and obesity and chronic disease prevention (Cheadle et al., 2013; Cheadle et al., 2010, 2011, 2012; Collie-Akers, Fawcett, & Schultz, 2013).

In the small body of literature that has examined the intensity of community interventions, no standard formula presently exists to compare the relative intensity of community interventions across goal areas. Because of the lack of consistency, it is difficult to fully understand the comparative intensity across interventions addressing a common goal. Thus, comparing the overall intensity of the SPF strategies to other comprehensive community interventions that address underage drinking becomes challenging. Although the lack of consensus among researchers creates difficulties for coalitions to apply a consistent methodology

to measure the relative effectiveness of their efforts, measuring the intensity of implemented interventions may need to be adapted for appropriateness. In this respect, a uniform or standard methodology may not always be appropriate or feasible for addressing the multiple types of community-based interventions that address behaviors that result in various preventable health-related conditions.

Strengths and Limitations

The present study's methodological approach to measuring the association between intensity of community changes and underage drinking outcomes has several advantages. First, it draws from the systematic documentation of community changes (i.e., new or modified programs, policies, and practices). The documentation allows for an analysis of the number and types of environmental changes necessary to achieve associated reductions in underage drinking outcomes. Second, the study identifies dimensions of community change by strategy, duration, and reach. These dimensions allow for researchers and practitioners to evaluate the strength of implemented community changes not only by type (i.e., program, policy, and practice change), but the dimensions also allow for evaluators to examine the strength of each type of community change. Third, the study uses independent scoring of the dimensions of community change intensity, which minimizes measurement bias. The inclusion of interobserver agreement procedures supports replication for measuring and analyzing the intensity of comprehensive community-based prevention interventions.

Despite the study's strengths, there were several limitations that should be noted. First, the community coalitions may not have documented all of their community changes into the Online Documentation and Support System (ODSS), despite completeness checks during quarterly technical assistance meetings. Thus, there is a possibility for the number of community

changes on which the intensity score are based to be underestimated. If there are more facilitated community changes than what was documented, it is unclear how the intensity score distribution and association would change.

Second, the formula used in this study to measure intensity has not been widely validated, particularly in the context of addressing underage drinking. Although the present methodology was used in previous research (Collie-Akers et al., 2013), the context in which it was applied was not related to substance abuse prevention. Therefore, the methodology warrants replication across interventions targeting underage drinking as a problem behavior.

Third, because this study uses a correlational design, causality between the intensity of community changes and improvement in underage drinking outcomes cannot be established. Therefore, it is unclear whether the same dimensions of community change (i.e., duration, strategy, reach) are the most salient in characterizing underage drinking-related community changes, or if there are other dimensions related to the present study's context that were not measured.

Fourth, the methodology used in this study does not measure exposure to the intervention. Specifically, the present study used the intensity, or amount, of the intervention implemented in communities as the independent variable; measuring exposure to the intervention would have allowed for an analysis of the environmental conditions that supported implementation of the intervention, and their collective association with underage drinking outcomes.

Study 2 Conclusion

The present study aimed to provide a systematic methodology for measuring the strength of association between intervention intensity and outcomes of interest in the context of underage

drinking. The characterization of community changes allows for a visual analysis of community coalitions' progress toward improving outcomes. In the SPF context, the present study provides coalitions a methodology for documenting some aspects of the dose of the community. The current literature in substance abuse prevention suggests a need for identifying and documenting a dose-response relationship between the implementation of community interventions and changes in outcomes. Moreover, measuring coalition efforts through community change provides a more proximal indicator of coalition effectiveness that may help to inform the likelihood of attaining outcomes prior to the conclusion of an initiative. The methodology presented in the present study suggests that framing and measuring facilitated community changes as a cumulative indicator of coalition efforts may provide an additional metric by which community organizations can evaluate their progress over time.

Overall Summary

The overall findings provide some evidence of the Strategic Prevention Framework's effectiveness in improving underage drinking related outcomes in the intervention communities, although the overall findings were mixed. The results also show a strong positive correlation between the intensity of facilitated community changes and improvement in outcomes. The dissertation studies support a multi-disciplinary approach to addressing underage drinking and integrates theoretical approaches and measures from the fields of applied behavioral science, public health, community psychology, and prevention science. Additionally, the results of the study suggest that using comprehensive community interventions can occasion behavior change at the community level.

The present dissertation research informs both the science and practice of substance abuse prevention with empirical evidence of using a comprehensive community intervention to

improve underage drinking outcomes. In addition, the findings suggest that building capacity through training and technical assistance, and the implementation of action plans, can support coalitions' efforts to bring about and sustain the implementation of evidence-based community change strategies. Not only does the present research demonstrate significant reductions in underage drinking outcomes over time, but it also provided a methodological approach to measuring the strength of association between the intensity of implemented community changes and underage drinking outcomes. To date, very few studies in the substance abuse prevention literature, if any, delineate a methodology for measuring such an association with respect to community-based interventions that address underage drinking.

General Strengths and Limitations

The presented studies provide a data-driven approach to addressing underage drinking through a comprehensive community-based prevention intervention. While the Strategic Prevention Framework has been implemented in 49 states to date, the present research is one of a limited number of studies that have examined the effects of the Strategic Prevention Framework on improvements in underage drinking out comes and sustainability of implemented environmental changes. Not only does the SPF support coalition efforts to make data-driven decisions, but it also allows for a local and state infrastructure to build coalition capacity to effectively address underage drinking related goals. A number of studies have described the utility of using data and ongoing evaluation to build coalition capacity to modify the antecedents and consequences of underage drinking (Flewelling, Birckmayer, & Boothroyd, 2009; Hoefer & Chigbu, 2013; Orwin, Edwards, Buchanan, Flewelling, & Landy, 2012; Orwin et al., 2014; Piper et al., 2012).

The studies also used a mixed-methods approach and multiple measures to examine underage drinking outcomes, from self-reports to behavioral measures. Specifically, communities identified and operationally defined the target behavior and examined available data regarding the epidemiology of underage drinking. Moreover, community coalitions described the specific behaviors that support facilitation of community-level changes to reduce underage drinking in their communities. While much of the substance abuse prevention literature demonstrates improved outcomes as a result of implementing community-based interventions, relatively fewer studies have adequately addressed the sustainability of intervention effects over time. The present research uses both quantitative and qualitative analyses to illustrate the context, conditions, and coalition efforts that both enhanced and impeded coalitions' efforts to sustain community changes and evidence-based strategies.

Despite the studies' strengths, there are some overall limitations. The first study made extensive use of surveys to measure behavior. While permanent products, corroborated data, and collateral measures were obtained, there was still recall bias and potential reactivity of the Community Readiness Survey, Collaboration and Capacity Survey, and the Kansas Communities That Care Survey. While the Kansas Communities That Care Survey is widely-used validated tool, youth who completed the survey may not have always accurately responded to the survey questions. For instance, some youth may have provided survey responses they perceived would be socially acceptable to adults who may review the findings.

Second, there were limitations related to survey administration and participation. While attempts were made to assure the same individuals completed the surveys in baseline and intervention conditions, it cannot be assumed that all attempts were successful. During the course of the intervention, some communities may have experienced personnel turnover that may have

affected the number and types of individuals who completed the surveys in the baseline and intervention conditions.

A third limitation is that coalition members' documentation in the Online Documentation and Support System may have been missing or inaccurate. While efforts were made to validate documented activities through permanent products (e.g., newspaper articles, meeting minutes, written policies), it is possible that some documented efforts were still missing or incomplete in the system.

Fourth, a selection-maturation bias could not be minimized due to the nonrandomization of communities in the intervention. Particularly, communities in the intervention communities were selected based on their disparately higher rates in underage drinking outcomes prior to the intervention commencing. In addition, because the intervention and comparison communities were not randomized, it is not clear to what degree potential confounding or extraneous variables, such as local prevention efforts implemented in the comparison communities, may have contributed to the trends in outcomes.

Implications for Future Research

Given the findings and limitations of the previously described studies, future research should use additional measures of outcome variables, including permanent products of the target behavior. At the community level, this may become challenging; thus, researchers and practitioners should also consider other community-level indicators (e.g., alcohol-related motor vehicle crashes, alcohol-related citations) that can validate self-reported measures. In addition, future studies should systematically examine the effects of establishing reinforcers or punishers within and across ecological systems to support desired changes in underage drinking outcomes.

Further research is needed in examining how consequences at the community level influence alcohol consumption and related risk factors (e.g., parental access, retailer access). Establishing a contingency in which behavior has clear consequences would allow researchers to more systematically analyze underage drinking as an operant behavior. With these contributions, both researchers and practitioners can better plan for and target those consequences that are more likely to establish and maintain alcohol abstinence among youth.

With respect to the Strategic Prevention Framework, future research should further examine its efficacy as an approach for supporting comprehensive community interventions to address behaviors related to substance abuse. While the framework has been implemented in almost every state to date, there is little published research that demonstrate its effects on improvements in substance abuse related outcomes. Further examination of the framework's effects on substance abuse prevention and other community-level goals (e.g., violence prevention) can provide additional support to coalitions as they implement the intervention, as well as provide a basis for experimental replication and generalization of the present study's findings.

Future research and practice should make a more concerted effort to increase multisectoral engagement in comprehensive community interventions to address risk and protective factors of underage drinking. Population-level behavior is often influenced by contingencies in several ecological systems. Thus, multisectoral collaborations can support interventions targeting alcohol consumption. The literature suggests that engaging multiple sectors in implementing interventions can occasion behavior change in alcohol consumption across multiple ecological levels.

Subsequent studies should further explore the methodology used in the second study to measure the intervention dose and its association with targeted behavior change. Particularly, additional studies should examine whether differential effects in outcomes exist between communities with a higher intervention dose compared to those communities with lower intervention doses, as a test for discriminant validity. Moreover, future research should test for convergent validity, specifically regarding the components of intervention dose identified in previous research (e.g., Cheadle et al., 2010; Cheadle et al., 2012).

In substance abuse prevention, more research is warranted to better inform coalition efforts to support community-level changes and address identified influencing factors of targeted behavior. As future studies replicate the methodological approach described in the second study, it is expected that a more consistent and refined practice of measuring intensity and collaborative impact would emerge to inform the implementation of community-based prevention interventions. This refinement over time may allow both scientists and practitioners to understand what combinations of program, policy, and practice changes would be more likely to bring about desired changes in population-level outcomes.

Conclusion

This dissertation research examined the effects of SPF implementation on underage drinking outcomes in seven Kansas communities. In addition, it analyzed the association between the intensity of intervention implementation and changes in outcomes. The findings not only provide empirical evidence regarding the implementation of SPF as a multi-site, community-based intervention, but also enhance the understanding of intervention dose and sustainability of community-based prevention interventions.

In the past 20 years, researchers and practitioners have recognized the utility of using multicomponent interventions to address behaviors with complex etiologies, such as substance abuse; the use of evidence-based programs and environmental strategies, as well as multisectoral engagement, have been shown to be useful in addressing alcohol consumption across various populations. While much of the published literature presenting empirical data on the SPF focused on coalition processes, little research has used the framework to address underage drinking. The findings in the present studies provide further support to previous research suggesting that the SPF may be a promising model for guiding the implementation of a comprehensive community intervention to address underage drinking.

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Appendix A: Approval of Protocol for Kansas SPF-SIG (Renewal)

APPROVAL OF PROTOCOL

November 18, 2013
Jomella Thompson jomellaw@ku.edu
Dear Jomella Thompson:

On 11/18/2013, the IRB reviewed the following submission:

Type of Review:	Continuing Review
Title of Study:	Documentation and Evaluation of the Kansas Strategic Prevention Framework State Incentive Grant
Investigator:	Jomella Thompson
IRB ID:	18384

The IRB approved the study from 11/18/2013 to 11/23/2014.

1. Before 11/23/2014 submit a Continuing Review request and required attachments to request continuing approval or closure.
2. Any significant change to the protocol requires a modification approval prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at https://rgs.drupal.ku.edu/human_subjects_compliance_training.
4. Any injury to a subject because of the research procedure must be reported immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity.

If continuing review approval is not granted before the expiration date of 11/23/2014 approval of this protocol expires on that date.
Please note university data security and handling requirements for your project:
https://documents.ku.edu/policies/IT/DataClassificationandHandlingProceduresGuide.htm

Due to the eCompliance transition process documents associated with projects were not uploaded into the system. This means that consent forms, applications and other supporting documents were not automatically uploaded to this project**. If you need a consent form with the new expiration date on it, you will need to complete a modification in eCompliance to add the consent documents to the project.** You can do this by using the "Create Modification/CR" button and following instructions in the Modification/CR guide.

Sincerely,
Stephanie Dyson Elms, MPA
IRB Administrator, KU Lawrence Campus
Human Subjects Committee Lawrence
Youngberg Hall l 2385 Irving Hill Road l Lawrence, KS 66045 l (785) 864-7429 l HSCL@ku.edu l research.ku.edu

Appendix B: Prioritization Criteria for Kansas SPF-SIG Eligibility

Community Readiness: Willingness
For the purpose of this process, Willingness will be defined as the extent to which the State of Kansas general population and partner organizations considered the indicator to be major public concern. This category should represent the perceived impact the indicator has upon a community and their willingness to address the topic area.

Community Readiness: Capacity
For the purpose of this process, Capacity will be defined as the extent to which the communities are capable of addressing this topic now that funding has been made available. This category should represent the ability of Kansas communities to immediately begin work with minimal recruitment time.

Political Will
For the purpose of this process, Political Will shall be defined as the extent to which Local policy makers considerer the indicator to be major concern and are willing to address it through policy development. This category should represent the perceived impact the indicator has upon a community and the willingness of policy makers to support targeting this topic.

Feasibility of Resources
For the purpose of this process, Feasibility of Resources will be defined as the extent to which the proposed level of funding will make a population based impact on the consequences related to the indicator. This category should represent the ability to address the topic area in a meaningful way given the resources available for the project.

Feasibility of Time
For the purpose of this process, Feasibility of Time will be defined as given the timeline of 5 years the extent to which the indicator or intermediate variables leading to the indicator will change in the timeframe. This category should represent the ability to address the topic area in a meaningful way given the timeline available for the project.

Changeability/Preventability/Malleability
For the purpose of this process, Changeability/Preventability/Malleability will be defined as the extent to which the indicator will shift as a direct result of substance abuse prevention efforts. This category should represent the population attributable risk associated with a condition because of substance abuse.

Severity
For the purpose of this process, Severity will be defined as the extent to which the indicator represents the ultimate negative outcome. This category should represent how damaging an indicator is upon the individual as well as upon the environment/community in which the individual interacts.

Current Resources Addressing Topic
For the purpose of this process, Current Resources Addressing Topic will be defined as the extent to which other monetary and human resources are currently being allocated towards the topic in question. A high score in this category should represent limited or no resources addressing the topic whereas a low score in this category should represent a significant current investment in the topic.

Extent of Disparate Populations
For the purpose of this process, Extent of Disparate Populations will be defined as the degree to which the target population or subpopulations are more adversely impacted by this indicator than the general population. Examples include, but are not limited to: race/ethnic groups, pregnant women, youth, low socioeconomic status, access to health care, rural/urban, elderly population.

Appendix C: Kansas SPF Community Guidance Plan

Kansas Strategic Prevention Framework

Guidance for Developing the SPF Community Plan

Introduction

Strategic Prevention Framework (SPF) Grant to Reduce Underage Drinking Planning Grant recipients are required to develop and submit a comprehensive community plan for review, feedback and revision (as needed), and approval by the Kansas SPF State prevention team as the primary work product of the planning grant process. This guidance document is designed to assist grantees in developing their community plan, and outlines the timeline and process for submitting drafts as well as the final document. It also provides guidance on the types of data and steps needed to conduct a comprehensive community assessment of the influencing factors underlying underage drinking at the local level, as well as the information needed by the Kansas SPF State prevention team to approve the plan. The comprehensive community plan will set the stage for the development of a proposal for the implementation of proposed evidence-based prevention strategies to address underage drinking. This guidance document is organized around the five steps of the SPF, and illustrates the key steps necessary to help guide communities through the process of 1) conducting a thorough assessment of need, readiness, and capacity, 2) identifying appropriate evidence-based strategies to address local influencing factors and issues driving the incidence of underage drinking, and 3) outlining a process for evaluation, and 4) capturing this content in a comprehensive community plan.

Each community plan represents a work in progress, and is developed in tandem with the completion of assessment, capacity building, and planning processes. As such, the Kansas SPF State prevention team will provide feedback and support on drafts of the community plan as it is submitted, per the timeline provided below:

Table 1: Timeline for Community Plan Draft Submission

Community Plan Section/Component	Required Completed SPF Processes	Due Date for Draft Submission
Needs Assessment	● Assessment of local influencing factor data	
Readiness Assessment	● Completion of Tri-Ethnic Community Readiness Key Informant Survey ● Summary of readiness assessment results and implications for capacity building	

Community Plan Section/Component	Required Completed SPF Processes	Due Date for Draft Submission
Capacity Assessment	● Completion of local capacity assessment, including cultural competence and organizational capacity	
Capacity Building	● Develop community capacity development plan ● Develop capacity development plans across sectors	
Proposed Strategies	● Resource and Gap Analysis ● Review and selection of possible evidence-based strategies ● Check for alignment between needs and strategies	
Evaluation Plan	● Consultation with local and lead evaluator ● Development of preliminary evaluation processes	
Complete Community Plan	● Revisions completed for all sections in response to Kansas SPF State prevention team feedback	
Finalized Community Plan	● Final revisions completed and submitted ● Kansas SPF State prevention team final review and approval	

The following sections provide detailed explanations of the essential components and contents of your comprehensive community plan.

ASSESSMENT

The assessment section of the community plan is divided into three basic components: 1) needs assessment, 2) readiness assessment, 3) capacity assessment, and 4) priority influencing factors. Additionally, the assessment must include a discussion of the process, criteria, and rationale for identifying and selecting priority influencing factors underlying underage drinking that will be addressed through evidence-based strategies. Guidance for each of these four elements is provided below.

1. **Needs Assessment of Influencing Factors Underlying Underage Drinking**

Using an array of appropriate epidemiological, student survey, and other data, describe the influencing factors underlying underage drinking in your community. Influencing factors may be risk and protective factors, contributors, causal factors, or other issues that increase the

likelihood of underage alcohol consumption, particularly past 30-day use and binge drinking among students in grades 6, 8, 10, and 12. This section of the community plan should include:

A. A description of the data indicators that represent local influencing factors for underage drinking (i.e., past 30-day use and binge drinking among students in grades 6, 8, 10, and 12) used by your community for assessment and prioritization. In addition to the data assessed, data sources and definitions should also be included as an appendix.

B. A description of the criteria used for data analysis and prioritization (e.g., magnitude, time trend, relative comparison, severity, etc.) on which decisions were based.

C. A discussion of the methods used and involvement of local stakeholders during the assessment and prioritization process, including the selection, collection, organization, review, and prioritization of the community's influencing factor data.

D. Describe in detail (including data citations) the patterns of underage drinking in your community, patterns of differential consumption across youth populations (e.g., across age and other demographic characteristics) and geographic areas. Please provide, in addition to the narrative account, an appendix that provides a visual account (i.e., photographic representation) of what underage drinking "looks like" in your community.

2. Community Readiness Assessment

Provide a description of the process and results of the Tri-Ethnic Community Readiness Assessment interviews conducted in the community. In particular, please include in this section the following elements:

A. Summarize the process used for selecting participants and conducting the Community Readiness Assessment key informant interviews. Explain how the readiness assessment process was designed and implemented to ensure optimal representation of perspectives throughout the community.

B. Include a summary report of the Community Readiness interview results as an appendix, and including summary scores across participants (overall) and by sector for the 35 questions across the six domains assessed: community efforts, community knowledge of efforts, leadership, community climate, knowledge about the issue, and resources for prevention efforts.

C. Discussion of how the findings from the Community Readiness Assessment interviews can be applied to the SPF process to guide prevention efforts at the local level and increase community readiness to comprehensively address underage drinking, and sustain local efforts and outcomes.

3. Community Capacity Assessment

Using appropriate data and information, describe the organizational capacity in place to support your community's prevention efforts. This component should incorporate:

A. A summary of the prevention supports and/or infrastructure in place, in terms of personnel, resources, and systems. This should include both formal (e.g., coalitions, prevention providers, youth-serving organizations, other community partnerships) and informal supports (e.g., resources, community assets, and social capital).

B. Discussion of the effectiveness of these existing resources, supports, and infrastructure.

C. Analysis of notable gaps in your community's prevention supports/infrastructure.

D. Discussion of the capacity of the community as a whole to address underage drinking, beyond the community partnership's efforts and involvement of key community leaders.

4. Rationale and Description of Priority Influencing Factors

Provide and discuss the criteria used and key decisions made in the process of identifying the priority influencing factors for underage drinking that your community will be focusing on through the SPF Grant to Reduce Underage Drinking. Your description should include:

A. Review of the process used and the community stakeholders (individuals and group, i.e., subcommittee) involved in the effort to organize and prioritize local influencing factors underlying underage drinking. Include any additional criteria impacting prioritization considerations (e.g., community readiness or capacity, existing resources, etc.).

B. A description of key decisions made and the priority influencing factors to be addressed through the SPF Grant to Reduce Underage Drinking that were identified through the assessment and prioritization process.

C. Identification and description of influencing factors specific to identified target population(s), geographic areas, or other designations, as appropriate.

Capacity Building

In completing the Capacity Building section of the community plan, please provide a synopsis of the proposed approach for enhancing, developing, or ensuring local-level capacity for prevention efforts to address underage drinking. Capacity building planning should reflect results from the completed community readiness and capacity assessments. This section includes three key elements: 1) areas needing strengthening, 2) proposed community capacity development strategies, and 3) capacity development strategies within community sectors.

1. Areas Needing Strengthening

Identify and describe areas in which the community needs to strengthen capacity in order to effectively address underage drinking. This discussion should include highlights of the analysis of the community readiness and capacity assessments.

2. Proposed Community Capacity Development Strategies

Describe capacity-building activities that will be conducted at the community level to address identified needs in identified areas needing strengthening, including readiness and capacity development. Strategies should also include proposed approaches for increasing community involvement and support for underage drinking prevention efforts through community mobilization and messaging. Additionally, strategies to address notable gaps in your community's prevention supports/infrastructure identified through the assessment process should be noted.

3. Capacity Development Strategies Within Community Sectors

Discuss the process to be used for developing a capacity building plan for each of the required 12 community sectors to engage in effective prevention efforts during the SPF Grant to Reduce Underage Drinking implementation phase. In addition, please discuss strategies to be implemented that enhance cross-discipline collaboration, communication, and networking.

PLANNING & SELECTION OF EVIDENCE-BASED STRATEGIES

This section should describe the proposed evidence-based strategies for addressing the community's priority influencing factors underlying underage drinking. This section must also include a discussion of the community's planning process and method of identifying appropriate evidence-based strategies that correspond to, or align with, the priority influencing factors. This section must include the following elements:

1. Proposed Evidence-Based Strategies to Address Priority Influencing Factors

Describe the evidence-based strategies (i.e., policies, programs, and practices) proposed to address the identified local influencing factors for underage drinking. Please describe the method for identifying these strategies and the process and individuals involved in the review and selection of strategies. In addition to this description, the connection between underage drinking, priority influencing factors, and proposed strategies should be depicted in a logic model provided as an appendix to the community plan.

2. Alignment of Evidence-Based Strategies with Priority Influencing Factors

Given the community patterns of underage drinking associated with past 30-day use and binge drinking among youth that emerged from the assessment, the prioritized influencing factors, and the proposed evidence-based strategies, please discuss the process used for ensuring that the strategies selected correspond directly with their associated priority influencing factors.

3. Timelines and Milestones for Implementation

Provide a description or visual depiction (that is, a chart, table, graph, etc.) of the anticipated timelines and milestones developed for implementation of the evidence-based strategies and capacity development activities outlined in the community plan.

4. Ensuring Cultural Competence, Proficiency, and Inclusivity

Discuss how the proposed evidence-based strategies are culturally competent, proficient, and inclusive of the community's diversity, or how planning for their implementation includes these considerations.

5. Planning to Sustain Outcomes

Discuss how the evidence-based strategies and/or SPF processes to address prevention issues (e.g., assessment, capacity building, planning, implementation, and evaluation) will be supported and sustained once SPF grant funding has ended. Include a discussion of how multi-agency collaboration and leveraging of resources will be planned for and facilitated to support the sustainment of SPF processes.

IMPLEMENTATION

This section focuses on the approach the community will take in implementing the proposed evidence-based strategies to address underage drinking, as well as capacity development efforts and sustainment planning throughout the duration of SPF community-level funding. Discuss the proposed implementation plan and/or action plan for the proposed evidence-based strategies, including:

A. Proposed implementation plan for specified evidence-based policies, programs, and practices to address underage drinking;
B. Implementation of proposed evidence-based policies, programs, and practices to address underage drinking with fidelity and appropriate duration, saturation, and intensity;
C. Method for mobilizing and ensuring ongoing participation in communities of practice across community sectors;
D. Coordination and leveraging necessary resources for effective strategy implementation;
E. Summary of Memorandums of Agreement (MOA's) from key stakeholder groups and organizations essential for the full implementation of proposed evidence-based strategies. MOA's should be included as an appendix to the community plan, and should outline specific roles and contributions to be provided by stakeholder groups and organizations;
F. Review the challenges or potential issues that may be encountered during the implementation phase of the community plan, and how they are being considered as part of implementation planning;
G. Discussion of how proposed strategies are non-duplicative and do not supplant existing state or federal prevention funding; and
H. Summary of staffing patterns and organizing structures in place, or to be put into place, to support the implementation of the proposed strategies.

EVALUATION: MONITORING AND MEASURING EFFECTIVENESS

In the Evaluation section of the community plan, grantees should provide a preliminary discussion and describe planning for local-level evaluation. Please include the following considerations:

A. Given the evidence-based strategies outlined in your community plan, discuss the monitoring and evaluation activities you anticipate implementing, i.e., the local-level evaluation plan;
B. Describe what you are expecting to track and how this will be accomplished;
C. Discuss what you are expecting to change and to what extent, that is, the outcomes you intend to achieve in reducing 1) underage drinking indicators (i.e., youth past 30-day use and binge drinking) and 2) community-level influencing factors underlying underage drinking – please cite specific data indicators and sources;
D. Summarize the proposed process for ensuring completion of required program and community-level evaluation and reporting; and
E. Describe your community's plan for maintaining accountability for program and fiscal deliverables throughout the implementation phase of the SPF Grant to Reduce Underage Drinking.

Appendix D: Scoring Criteria for Community Changes and Services Provided

Community/System Changes (CC)

General Definition: **New or modified programs, policies or practices in the community or system facilitated by the initiative and related to its goals and objectives**. Changes that have not yet occurred, which are unrelated to the group's goals, or those which the initiative had no role in facilitating are not considered community changes for the initiative. [Note: We use the term "Community/System" and "Community" Changes interchangeably since they represent the same type of event at different levels (e.g., neighborhood or city or broader system).

Coding Instructions:

CC1 Community changes must meet all of the following criteria:

CC1.1 have occurred (e.g., when a policy is first adopted; when a new program is first implemented - not just been planned), and

CC1.2 are related to the initiative's chosen goals and objectives, and

CC1.3 are new or modified programs, policies, or practices in different parts of the community or system (e.g., government, business, schools, health organizations), and

CC1.4 are facilitated by individuals who are members of the initiative or are acting on behalf of the initiative.

CC2 When considering whether an event is new or modified: to be judged as "new," a program, policy or practice must not have occurred before in the effort (e.g., with these groups of people, with these organizations or partners, in these settings, delivered in these ways). To be judged as "modified," a program, policy or practice must be expanded or altered (e.g., a training program was expanded to include new modules, a policy was altered to affect new groups of people, a program was delivered in new organizations or places).

CC3 When considering whether to score multiple events as one instance or as multiple instances of a community change: To be judged as multiple instances, changes must be implemented in multiple settings (e.g., different schools or businesses) or levels (e.g., local, state levels) AND require separate approvals (e.g., a school principle approved a life skills program to be taught in her school; a second principle later agreed to do so in his school). If the event either occurred in only one setting or occurred as a result of one approval, it is coded as **one** instance of community change (e.g., the school board agreed to implement a district-wide life skills program that was implemented in multiple schools).

CC4 When multiple entries of the same event are being entered/documented: The recorders involved should discuss how to record the event as a single entry (e.g., the same program implemented in the same place by multiple groups). If there is disagreement, a data coordinator should resolve differences to best represent how the environment is changing in a way that does not count the same event multiple times.

CC5 The *first* instance of implementation of a new program or practice in the community is coded as a community change, since it constitutes a change in a program or practice in the community.

CC6 A first time occurrence or enactment of a policy is recognized as a CC at the point of approval to implement the policy.

CC7 The *first* committed agreement of collaboration between two or more organizations or individuals facilitated by individual(s) who are acting on behalf of the initiative. For a collaboration to occur, independent groups must commit to sharing at least one of the following: 1) resources, 2) responsibilities, 3) risks, and/or 4) rewards.

CC8 Not all first-time events are community changes; *the event must meet all parts of the definition of a community change.* For example, if staff members attended a seminar for the first time it is generally not a community change.

CC9 Specifically excluded as community changes are Planning Products (e.g., new bylaws, completed action plan) and Resources Generated (e.g., a grant or donation to the initiative) that occur internal to the initiative.

Some Examples of Community Changes:

- ✓ Members of the Promise Community Coalition brought together representatives from five sectors for the first time to form a speaker's bureau. This new program will help connect the community and is directly related to the coalitions' goals. (A new program. See coding instruction CC1.)

- ✓ The University board approved a new campus policy related to early intervention around substance use/abuse after meeting with our DFC Substance Abuse Prevention Coalition. This new policy will help the initiative identify substance abuse among students earlier. (A policy change directly related to the coalition's actions and specific objectives. See coding instruction CC1.)

- ✓ The DFC Substance Abuse Prevention Coalition and the local treatment center presented a workshop at the school for students and parents on prevention of youth substance use. This was the first time this workshop was presented in the community for local students and parents. This workshop helped educate community leaders. (A new program created by the coalition's partnering with a local resource. See coding instruction CC1.)

- ✓ After speaking with our Youth Tobacco Free Coalition, law enforcement decided to revise their documentation practice to include additional information when enforcing laws with youth under the age of 18 caught with tobacco. This practice change in documentation will help identify specific populations in our community that have an elevated level of tobacco use. (A practice change. See coding instruction CC1.)

Some examples of items <u>not</u> coded as Community Changes:

- ✓ The Youth Tobacco Free Coalition plans to administer a new program to increase awareness of the effects of alcohol and other depressants on motor skills. This program will help educate high school students in the community. (Outcome written in the future

tense. It will only be coded if it already occurred. See coding instruction CC1.1. This entry would be coded X.)

- ✓ The Promise Community Coalition formed a new subcommittee to develop a strategic plan to address federal legislative issues. This new subcommittee will help the coalition form a better strategy for addressing legislative issues. (This would be coded as a Planning Product because it reports a change in the organization of the initiative, not the community. See coding instruction CC1.3.)

- ✓ The DFC Substance Abuse Prevention Coalition's administrative assistant reported that the AME church started a new Sunday afternoon support group for recovering substance abusers. This new program will help reach more people within our community. (As written, the program was not facilitated by the DFC Substance Abuse Prevention Coalition. See coding instruction CC1.4. The entry would be coded X.)

Services Provided (SP)

General Definition: The delivery of information, training, material goods, or other activities by members of the initiative to people in the community. Services provided include classes, programs, services (e.g., screenings), workshops, material goods, or other services. Records on services provided might include the number of classes or programs conducted and the number of participants in those classes/programs.

Coding Instructions:

SP1 Services provided must meet all of the following criteria:

- SP1.1. have occurred and/or are ongoing, and
- SP1.2. are information, training, material goods, or other services, and
- SP1.3. are sponsored or facilitated by members of the initiative, and
- SP1.4. are delivered to the community served by the initiative.

SP2 When a *new* program is initiated (i.e., a community change), its first instance of implementation should also be coded as a Service Provided if it meets the criteria for SP. Any continuing instances of programs are coded as Services Provided.

SP3 If a presentation (e.g., to the City Council), is intended to bring about a community/system change, then it should be coded as a Community Action (CA). If a presentation is intended to simply deliver information, then it should be coded as a SP.

SP4 Each instance of a Service Provided (e.g., each delivery of a class or workshop) should be entered and coded separately in the ODSS.

SP5 Events to plan services (e.g., meetings to decide the content of a class) are coded as Other.

SP6 Excluded as Services Provided are Media Coverage (M) and Resources Generated (e.g., a grant or donation to the initiative).

SPF-SIG Decision Rule

Services Provided (SP) supports two-way communication between the service provider (e.g., presenter, facilitator) and the individual(s) receiving the service or being served. For an activity or event to be scored as a services provided, the activity must result in some form of direct service delivery that provides opportunity for two-way communication (e.g., staff provide information booth at fair and distributes brochures).

Some Examples of Services Provided:

- ✓ The Derby School Committee led a life skills module on resisting peer pressure. Participants of the session were approximately 30 fourth grade students from Sunnyside Elementary. (This is a Service Provided since the session provided a service related to the Derby School Committee's mission. See coding instructions SP1 and SP3.)

- ✓ The DFC Substance Abuse Prevention Coalition held substance abuse prevention workshops for social workers in the regional area. (This is a Service Provided because it

is a workshop related to reducing risks for health problems targeted by the initiative. See coding instructions SP1 and SP3.

- ✓ The DFC Substance Abuse Prevention Coalition held a conference on evidence-based substance abuse programs for 20 community agencies. (This is a Service Provided since it is an educational program related to the goals and objectives of the initiative. See coding instructions SP1 and SP3.)

- ✓ The Meth State prevention team members led a workshop on evidence-based meth abuse prevention programs for drug treatment centers in Kansas. (This is a Service Provided since it is an educational program delivered by the initiative related to the goals and objectives of the group. See coding instructions SP1 and SP3.)

Some examples of items not coded as Services Provided:

- ✓ Little Apple Task Force developed a mailing list of potential conference attendees. This list of potential attendees ranged from state wide participants to local participants. It required several meetings to complete this process. (This is planning for a future service. The later result will be the formation of a conference. See coding instruction SP1.1. This item would be coded as X.)
- ✓ The DFC Substance Abuse Prevention Coalition has planned substance abuse prevention education workshops for the community elementary schools. The plan is to reach 1,000 elementary students. The workshops will be conducted in the month of March. (This service has not yet occurred. See coding instruction SP1.1. This entry would be coded X.)
- ✓ The Derby School Committee presented a new policy proposal to the Derby School Board regarding the policy on Taser use within the Derby Schools. The presentation was presented to the Board with the intention to modify the current policy. The Board is considering the proposal and will announce its decision at the next School Board meeting next month. (This service was intended to bring about a community change. See coding instruction SP3. This entry would be coded as a CA.)
- ✓ Families United will provide substance abuse prevention education classes in the month of March. These classes will reach out to administrators at schools. (This service has not yet occurred. See coding instruction SP1.1. This entry would be coded X.)

Development Activity (DA)

General Definition: Actions taken to prepare or enable the group to address its goals and objectives (e.g., developing a community assessment, working on a strategic plan).

Scoring Instructions:

DA1 Development activities must meet all of the following criteria:

DA1.1. are actions taken to prepare or enable the group to do its work (e.g., developing a community assessment, working on a strategic or action plan, designing programs or interventions, developing evaluation instruments, developing plans for sustainability)

DA1.2. have occurred, not just planned

DA1.3. facilitated by members of the initiative or acting on behalf of the initiative

DA1.4 is not (or not yet) a Planning Product, Service Provided, Community Action, or Community Change

DA2 Development activities include tasks that further the work of the initiative (i.e., assessment, collaborative planning, targeted action or intervention, evaluation, sustainability).

DA3 Development activities can lead to materials or products such as assessments, analyses of information, strategic plans, training manuals, evaluation plans or reports, organizational or sustainability plans, grant applications, or other products related to the work of the initiative.

DA4 Development activities include engagement with the broader community that prepares or enables the group to do its work (i.e., members of the initiative attending a meeting to increase individual skills or capacity to address initiative goals/objectives, or facilitating a meeting with the community aimed at a specific objective(s) like planning a drug free alternative for youth).

Some Examples of Development Activities:

- ✓ John and Sue from the Coalition met with consultants about revising the community assessment. The updated community assessment will help the coalition better understand the community environment (See scoring instruction DA2).
- ✓ The evaluation work group from the Safe Streets Coalition worked with evaluators on developing the evaluation plan. This plan will help Safe Streets better understand the effectiveness of their community efforts (See scoring instruction DA2).
- ✓ John and Carol from the Community Coalition conducted a literature review of risk/protective factors to guide the group's intervention (See scoring instruction DA1.1).
- ✓ The Coalition director met with funding agency to plan for future grant application. Securing additional funding will help sustain the coalition's intervention in later years (See scoring instruction DA2).

- ✓ Sue, the evaluator for the coalition, created a tracking program for the initiative's activities. This tracking program will help the coalition better analyze the efforts put into each intervention (See scoring instruction DA3).
- ✓ The Coalition planning committee worked with collaborative partners to develop a draft action plan. The action plan will be a guide for future community activities (See scoring instruction DA1.4).

Some examples of items that are <u>not</u> scored as Development Activities:

- ✓ The Director of the Coalition scheduled a series of monthly meetings with funding agency for ongoing strategy development. (The meetings would eventually be coded as Development activities, but not until they actually occurred. See scoring instruction DA1.1 and DA1.2. Entry would be scored as X)
- ✓ School board members met to discuss a review of literature on risk factors related to the problem. (This is not a Development Activity since it was not done by members of the initiative. See scoring instruction DA1.3. Entry would be scored as an X unless school board members are part of the initiative.)
- ✓ Sue and John from the coalition gave a presentation to the City Council to raise awareness about the project and what it has accomplished. (This is a Services Provided since it involves providing information and communications to community members outside the initiative.)
- ✓ The coalition members met and developed goals for community change the next quarter. (This is a Planning Product. See scoring instructions PP1.)

Media Coverage (M)

<u>General Definition</u>: Promotion of the initiative or its activities through coverage by a media channel (e.g., newspaper, radio, television) or by distribution of materials related to the initiative, group, or its efforts (e.g., flyers, brochures).

<u>Coding Instructions</u>:

M1 Media coverage must meet all of the following criteria:

M1.1. have occurred (not just planned), and

M1.2. be an instance of coverage through radio time, television time, newspaper article, internet, advertising, newsletter, or other media outlet or other routine distribution of materials and

M1.3. feature the initiative or its activities.

M2 Media coverage is counted if it features the project, even if the coverage was not initiated directly by the group. Airings and articles not facilitated by the initiative are valid only if the name of the initiative or one of its projects or products is mentioned or referred to.

M3 Internally produced media (such as newsletters, newsletter articles) can be counted as media coverage.

M4 These may be coded as: a) instances of coverage, b) column inches of coverage (for print media), and/or c) minutes of coverage (for broadcast media).

M5 Simply distributing a press release is not considered to be an instance of Media coverage. However, it would be counted as an instance of Media coverage at the point of time in which it is picked up as a story in a local media outlet (e.g., newspaper, radio, television, newsletter).

<u>SPF-SIG Decision Rule</u>

Activities supporting one-way communication, which are primarily intended to provide information through the distribution or dissemination of some form of media (e.g., brochure, flyer) is an instance of media coverage.

Estimate reach for radio, television and newspaper media based on the population served by the station (i.e., viewership or subscriptions) of the station.

For billboards and other communitywide media, the reach is estimated as the total community population (e.g., school population).

Estimate the number reached based from items distributed or permanent product distributed (when have actual count).For media forms in which media isn't distributed then use estimates of population or target, when it is not possible to identify the viewership or subscriptions.

Some Examples of Media Coverage:

✓ A newspaper article described the Smart Start initiative, which began this week. Chris

Smith from the Smart Start initiative was interviewed for this article and the Smart Start initiative was mentioned by name. (Coded as 1 unit and/or the column inches used. See coding instructions M1 and documentation instructions.)

- ✓ Five, 10 minute radio spots describing the Strong Family Ties initiative aired on the local AM radio station. Amy Martin, the Program Director, was interviewed and spoke about the details of the initiative. (Coded as 5 units and/or 50 broadcast minutes. See coding instructions M1 and documentation instructions.)
- ✓ Eight, 3 minute radio spots describing the Social Hosting Liability policy change efforts aired on the local FM station. Nell Miller, ad advocate with the initiative was interviewed. (Coded as 8 units and/or 24 broadcast minutes. See coding instructions M1 and documentation instructions.)

Some examples of items <u>not</u> coded as Media coverage:

- ✓ An article on a substance abuse prevention effort in Washington, DC public schools appeared in the local newspaper. The article featured quotes from the superintendents of five DC schools. (This is not an instance since the program was not connected to the initiative. See coding instructions M1.3 and M2. This entry would be coded X.)
- ✓ The local health department developed and distributed a public service announcement on the dangers of marijuana. (This is not an instance since the press release was sent but the story has not yet been picked up by the media. See coding instruction M5. Entry is coded X.)

<u>Documentation Instructions</u>:

Record the number of instances and the extent of coverage (i.e., column inches of print media, minutes of broadcast media) for each media exposure. For TV and radio, every airing of a public service announcement (PSA), news report, or event in which the initiative or one of its programs is mentioned is counted as a discrete instance and/or in broadcast minutes. Every newspaper article mentioning the initiative or program is counted as an instance. Every newsletter article is an instance. Each different brochure disseminated is an instance.

Appendix E: Kansas SPF-SIG Interview for Sustaining Community Changes

Introduction to the interview: The purpose of the interview is to learn about the sustainability of community changes (i.e., new or modified programs, policies, or practices) facilitated by your coalition since June 2012. This will help to understand the factors and conditions that contributed to the ability of your coalition to sustain implemented changes in the community.

Context of the Initiative: (In what context were you working?)

1) Describe your involvement and what brought about your involvement with the organization.
2) How involved are other members of the community with the organization?
3) Is the SPF-SIG initiative perceived as effective in your community?

Critical Events of the Initiative: (What factors influenced the success of the organization?)

1) How effective has SPF-SIG been in sustaining programs, policies, and practice changes facilitated by your coalition?
2) What are the sources of funds for the program (internal, external, a mixture)? What are the community's local resources? Can the overall community afford to support most of the components of the efforts implemented by your coalition?
3) What factors have contributed to the sustainability (i.e., maintenance) of programs, policies, and practices facilitated in the community by the coalition
4) Does your coalition collaborate with other groups regarding the sustainability of programs, policies, and practices implemented by the initiative?

Assessment of Strengths and Challenges: (What worked? What didn't work?)

1) What worked especially well for the organization in sustaining its efforts?
2) What were the most significant achievements of the organization in sustaining its efforts?
3) What specific challenges has the organization faced in sustaining its efforts?

Key Resources & Support:

1) What key resources and supports (e.g., people, financial resources, political influences, etc...) were particularly helpful in sustaining the work of the initiative?
2) What additional support, if available, would have further contributed to success?
3) Are there champions for your coalition in the community?
4) How favorable is the socioeconomic and political environment for sustaining the efforts of your coalition?

Future Plans and Recommendations.

1) What lessons have you learned about sustaining prevention efforts in the community?
2) What is the future of the organization/initiative to sustain its efforts?
3) What was done that should be continued or enhanced to sustain the efforts of the initiative?
4) What improvements would you suggest to sustain the efforts of the initiative?

Appendix F: Illustrative Example of Calculated Community Readiness Scores

Community Readiness Dimension	Interview 1	Interview 2	Interview 3	Interview 4	Interview 5	Interview 6	Summed Score	Overall Score
Efforts	3.5	5.0	4.25	4.75	5.5	3.75	26.75	4.46
Community Knowledge of Efforts	4.25	3.75	3.0	4.5	5.0	3.0	23.5	3.92
Leadership	3.25	4.5	3.5	3.75	5.25	4.75	25.0	4.17
Community Climate	2.75	2.25	3.0	3.5	3.5	2.25	17.25	2.88
Community Knowledge of the Issue	3.5	5.0	4.75	3.75	4.5	4.0	25.5	4.25
Resources	4.25	4.75	5.5	5.0	3.75	3.5	26.75	4.46
Overall Interview Score	--	--	--	--	--	--	--	**4.02**

Appendix G: Illustrative Action Plan, Sumner County Community Drug Action Team

<table>
<tr><th colspan="3">Sumner County Community Drug Action Team
Action Plan - LifeSkills</th></tr>
<tr><th colspan="3">Objective, Strategy, and Measures</th></tr>
<tr><td colspan="3">Underage Drinking Outcome:
By December 31, 2011 reduce the proportion of Sumner County youth in the 6th, 8th, 10th and 12th grades participating in the KCTC survey who report consuming alcohol in the past 30 days by 5 percentage points from a baseline of 31.7% in 2008; and binge drinking by 5 percentage points from a baseline of 16.3% in 2008.</td></tr>
<tr><td colspan="3">Objective relating to Targeted Influencing Factor:
By December 31, 2011 the proportion of Sumner County youth participating in the KCTC survey who report no risk to harming themselves if they take 1 or 2 drinks of alcohol nearly every day by 5 percentage points from a baseline of 11.3 % reporting no risk in 2008. (social norms)

By December 31, 2011 program participants will demonstrate a 30% increase in the knowledge of the dangers of alcohol as demonstrated by comparing pre-test to post-test results. One year follow-up of participants will demonstrate post-test level maintenance of knowledge for 70% of participants.</td></tr>
<tr><td colspan="3">Strategy to Address Contributing Factor:
LifeSkills Training – Increasing knowledge of risk and protective factors for drug use through the topics of Self-esteem, Decision making, Smoking, Alcohol and Other Drugs, Violence & the Media, , Advertising, Coping With Anxiety, Coping With Anger, Dealing with Stress, Resolving Conflicts, Communication Skills, Social Skills, and Assertiveness.</td></tr>
<tr><td>Measure(s)/Indicator(s) Related to Strategy:</td><td>Data Indicator Source(s):</td><td>Person(s) Responsible for Collecting/Reporting Indicators:</td></tr>
<tr><td>1. Outcome and Influencing Factor data as defined in Outcome & Objectives above.</td><td>KCTC Survey</td><td>Greenbush
Grant Evaluator
Implementation Grant Coordinator</td></tr>
<tr><td>2. Knowledge of alcohol and its effects through utilizing LifeSkills Curriculum pre and posttests.</td><td>LifeSkills Curriculum</td><td>School Sector Rep
Implementation Grant Coordinator</td></tr>
<tr><th colspan="3">Action Steps to Support Implementation of Strategy – LifeSkills – SU CO</th></tr>
<tr><th>Activity</th><th>By When</th><th>Who is Responsible</th></tr>
<tr><td>1. KCTC Survey will be completed annually by 80% of Sumner County youth in grades 6th, 8th, 10th, and 12th.</td><td>Annually</td><td>Implementation Grant Coordinator and KCTC school contact
Greenbush
School Sector Representative</td></tr>
<tr><td></td><td></td><td></td></tr>
</table>

2. Contact schools to identify appropriate staff to be trained for LifeSkills Training program implementation. Locate and file MOA's for each school district.	September to November, 2009	Implementation Grant Coordinator School Sector Representative
3. Develop a computer based tracking system to tabulate LifeSkills pre and post test results and the LifeSkills Fidelity Checklist for Sumner County	September to November, 2009	Implementation Grant Coordinator
4. Order appropriate LifeSkills Training materials for implementation at each school	January 30, 2010	Implementation Grant Coordinator
5. Set training dates for Elementary, Middle School and High School and organize logistics	January 30, 2010	Implementation Grant Coordinator
6. Conduct Training Sessions for Elementary, Middle School and High School and distribute materials	January 30 - March 6, 2010	Implementation Grant Coordinator School sector representative
7. Complete pre-test before beginning LifeSkills lessons	March 2010	Implementation Grant Coordinator
8. Gather pre-test results and send to Implementation Grant Coordinator for input.	March 2010	Implementation Grant Coordinator Greenbush Evaluator
9. Implement LifeSkills Training based on the grade level curriculum	Beginning March 2010	School sector representative, LifeSkills Trained Facilitators
Action Steps to Support Implementation of Strategy – LifeSkills – SU CO		
Activity	By When	Who is Responsible
10. Complete observation of curriculum implementation in random classrooms to check for implementation with fidelity checklist	April 30, 2010	Implementation Grant Coordinator School sector representative LifeSkills Facilitators
11. Complete post-test on all students at end of LifeSkills lessons	May 24, 2010	Lifeskills Trained Facilitators Implementation Grant Coord., School Sector Representative
12. Gather post-test results and send to Implementation Grant Coordinator	May 31, 2010	Implementation Grant Coordinator Grant Evaluator

13. Compile and summarize pre and post test data and observer feedback for fidelity checklist of program. Brainstorm for changes in Fall 2010	June 10, 2010	Implementation Grant Coordinator School sector representative Possible local evaluator
14. Train any new staff or changes in staff	August 31, 2010 – September 2010	Implementation Grant Coordinator LifeSkills Trainer
15. Re-order materials for new school year	August 31, 2010	Implementation Grant Coordinator
16. Six month follow-up of Spring 2010 group participants.	November 30, 2010	Implementation Grant Coordinator School sector representative
17. Give pre-test for participants before beginning LifeSkills lessons	Beginning September 15, 2010	LifeSkills Trained Facilitators Implementation Grant Coordinator
18. Implement curriculum 2010-2011 School Year	September 30, 2010	LifeSkills Trained Facilitators Implementation Grant Coordinator
19. Give Post Test for participants at end of scheduled LifeSkills lessons	October 2010- May 2011	LifeSkills Trained Facilitators Implementation Grant Coordinator
20. Gather post-test results and send to Implementation Grant Coordinator	May 2011	Implementation Grant Coordinator Grant Evaluator
Action Steps to Support Implementation of Strategy – LifeSkills – SU CO		
Activity	By When	Who is Responsible
21. Compile and summarize pre and post test data and observer feedback for fidelity checklist of program. Brainstorm for changes in Fall 2011	June 10, 2011	Implementation Grant Coordinator School sector representative Possible local evaluator
22. Six Month follow up of Fall 2010 LifeSkills Implementation	May, 2011	Implementation Grant Coordinator
23. Train any new staff or changes in staff	August 31, 2011 – September 2011	Implementation Grant Coordinator LifeSkills Trainer
24. Re-order materials for new school year	August 31, 2011	Implementation Grant Coordinator
25. Six month follow-up of Spring 2011 group participants.	November 30, 2011	Implementation Grant Coordinator School sector representative
		LifeSkills Trained Facilitators

26. Give pre-test for participants before beginning LifeSkills lessons	Beginning September 15, 2011	Implementation Grant Coordinator
27. Implement curriculum 2011-2012 School Year	September 30, 2011	LifeSkills Trained Facilitators Implementation Grant Coordinator
28. Give Post Test for participants at end of scheduled LifeSkills lessons	October 2011- December 2011	LifeSkills Trained Facilitators Implementation Grant Coordinator
29. Gather post-test results and send to Implementation Grant Coordinator	By December, 2011	Implementation Grant Coordinator Grant Evaluator
30. Compile and summarize pre and post test data and observer feedback for fidelity checklist of program. Brainstorm for changes in Fall 2011	By December 15, 2011	Implementation Grant Coordinator School sector representative Possible local evaluator
Action Steps to Support Implementation of Strategy – LifeSkills – SU CO		
Activity	By When	Who is Responsible
31. Annually or as requested – provide reports to Sumner County Community Drug Action team & City of Wellington regarding progress with LifeSkills program	May 2010 & annually through December, 2011. Updates may be requested more often	Implementation Grant Coordinator
32. Annually or as requested by grant –Input data into ODSS system	Annually or as determined by SRS through at least December, 2011	Implementation Grant Coordinator
33. Evaluate LifeSkills Program	December, 2011	Implementation Grant Coordinator Input from LifeSkills Facilitators Grant Evaluator

Appendix H: Table of Evidence-Based Strategies Implemented in SPF Intervention

SPF Intervention Community	Evidence-Based Strategy (Intervention Elements)	Strategy Type	Influencing Factors Addressed by Evidence-Based Strategy		
			Social Access	Social Norms	Enforcement
Clay	**Project Success**	Program		X	
	Saturation Patrols/RAVES	Environmental			X
Finney	**Big Brothers Big Sisters**	Program			
	Collaboration, Advocacy, and Education with Law Enforcement	Environmental			X
	Collaboration with Schools	Environmental	X		X
	Guiding Good Choices (GGC)	Program	X		
	Life Skills Training	Program		X	
	Marriage 4 Keeps	Program			
	Protecting You Protecting Me	Program		X	
	Teen Intervene	Program		X	
	Too Good for Drugs	Program		X	
	Tutoring	Program			
Kingman	**Communities Mobilizing for Change on Alcohol**	Environmental	X	X	X
	Keep a Clear Mind	Program		X	
	Protecting You Protecting Me	Program		X	
	Strengthening Families	Program		X	
Nemaha	**Communities Mobilizing for Change on Alcohol**	Environmental	X	X	X
	Too Good for Drugs	Program		X	
Osage	**Big Brothers Big Sisters**	Program			
	Communities Mobilizing for Change on Alcohol	Environmental	X	X	X
	Project Alert	Program		X	
Reno	**Communities Mobilizing for Change on Alcohol**	Environmental	X	X	X
	Parenting Wisely	Program			
	Strengthening Families	Program		X	
Sumner	**Communities Mobilizing for Change on Alcohol**	Environmental	X	X	X
	Life Skills Training	Program		X	
	LionsQuest	Program		X	
	Strengthening Families	Program		X	
ALL	**TeenThinking**	Statewide Media Campaign	X	X	

Appendix I: Intensity Scoring Guidelines for Documented Community/System Changes

DIMENSION (related to quality)	RATING OF POTENTIAL IMPACT (Illustrative instances)		
	High (Score = 1.0)	Medium (Score = 0.55)	Low (Score = 0.1)
Goal (strength of relationship to underage drinking and related targeted influencing factors)	Highly related to underage drinking (UAD) and known risk/protective factors (e.g., training in peer-refusal skills)	Somewhat related (e.g., general ATOD awareness program)	Lower relationship (e.g., teen smoking reduction program). Goals non-specific to UAD.
Duration	Ongoing (e.g., change in school policy to increase consequences for using alcohol and other drugs; implementation of ongoing practices, such as new CTC implementation, etc.)	More than once (e.g., family communication series in successive church bulletins; evidence-based program implementation, media—billboards, ads, etc.)	One-time event (e.g., local health fair with booth on UAD; Red Ribbon Week, table tents, etc.)
Intensity of Behavior Change Strategy	Modifying policies (e.g., modified school policy to expand hours of after-school program) Changing the consequences (e.g., enhanced penalties for selling alcohol to minors)	Enhancing services and support (e.g., new program that increases access to adult mentors) Modifying access, barriers and opportunities (e.g., enhanced age verification for alcohol purchases)	Providing information (e.g., passing out brochures on UD prevention in after-school programs) Enhancing skills (e.g., teaching peer refusal skills in health classes)
Target	Youth—targeted (e.g., mentoring for youth with multiple risk markers) INDICATED	Youth--universal (e.g., PSAs to all youth about consequences of UD) OR Adults—targeted (e.g., vendors of alcohol products)	Adults—universal (e.g., PSAs to all adults about provision of alcohol to minors) OR Community (No target specified)—universal
Reach (See table below for a guide to population ranges. All ranges based on 2012 Population Estimates from the US Census Bureau QuickFacts.)	Activities likely to reach 21% and greater of the targeted community	Activities that are likely to reach between 6-20% of the targeted community.	Activities that are likely to reach 5% or less of the targeted community.

Note. Composite Impact Score = Goal + Duration + Change Strategy + Target + Reach

Appendix I (Continued)

Table of Population Ranges by County (for Scoring Reach)

County	Population Size (*N*)	0% - 5% of Population	6% - 20% of Population	20% - 100% of Population
Clay	8,531	0 – 461	469 – 1,740	1,749 – 8,531
Finney	37,200	0 – 2,009	2,046 – 7,589	7,626 – 37,200
Kingman	7,863	0 – 425	432 – 1,604	1,612 – 7,863
Nemaha	10,132	0 – 547	557 – 2,067	2,077 – 10,132-
Osage	16,142	0 – 872	888 – 3,293	3,309 – 16,142
Reno	64,438	0 – 3,480	3,544 – 13,145	13,210 – 64,438
Sumner	23,674	0 1,278	1,302 – 4,829	4,853 – 23,674

Appendix J: Definitions and Decision Rules for Intensity Scoring

Analysis of Contribution

The following ODSS sections (fields) of the data entry page are components of the analysis of contribution that are subsequently scored and weighted for weighted intensity score.

A. Goal: An aim or area intended to be reached by efforts directed at a specific target. When scoring the goal, consider the broader focus or intended impact area for the activity.

1. *Reduce Alcohol consumption.*
    a. Definition: Any activity that specifically targets or supports decreased alcohol consumption or alcohol consumption prevention. Includes activities specifically targeting alcohol or indicated influencing and contributing factors known to be related to alcohol consumption.
    b. Instructions: (1) The entry description must specify or state that the activity targets or is aimed at decreased alcohol consumption or a related term (e.g., underage drinking). (2) If the entry description does not specifically mention alcohol as the targeted goal area, the description must include a term (e.g., sobriety checkpoint, DUI) that is clearly known in the literature, in practice or as an evidence-based strategy related to alcohol prevention. (3) Excluded are activities that specifically target tobacco, marijuana, meth, or other drugs. Written descriptions that do not specifically state alcohol or a related term associated with alcohol consumption (e.g., DUI) or alcohol prevention efforts (e.g., underage drinking, social hosting) in the description cannot be included.
    c. Example(s): A Town Hall Meeting on alcohol consumption by minors in the community was coordinated by the coalition [An example because specifically mentions alcohol see 1.b.1]; A sobriety checkpoint was conducted by local law enforcement and the coalition. [An example because specifically mentions alcohol see 1.b.1].
    d. Non-example(s): A late night bowling party was held on prom night as a positive alternative activity for teens attending prom. [This is a non-example because it doesn't specify alcohol as the prioritized substance targeted by the activity.]

B. Targeted Age Group- General stage of life for the individual(s) the specific activity is directed or aimed.

1. *Children and Youth*
    a. Definition: An individual 18 years of age or younger, includes individuals in infancy, childhood and adolescence.
    b. Instructions: (1) The entry description must specifically indicate or state that the activity is directed towards or is aimed at children, youth or individuals under 18 years of age. (2) The entry description must indicate the ages, grade level (e.g., 9th grade, high school), or type of child/youth group (e.g., youth, children, students) to whom efforts are directed. (3) If the activity is related to alcohol consumption or underage drinking, youth can be considered

individuals 21 years of age or younger. For alcohol related activities to include individuals under 21 as youth, the activity cannot also target individuals (adults) over 21 years of age. Example: A new curriculum, Positive Action, was taught in 9th grade at Eisenhower High School for the first time [This is an example because the grade level and school type is identified in the description. See B.1.b.2.]

c. Non-example: A parenting program, Strengthening Families, was offered for the first time for parents of youth in the juvenile detention center. [This is a non-example because the program is for parents (adults). See B.1.b.1.]

2. *Adults*

a. Definition: An individual 18 years of age or older, including parents and workforce professionals.

b. Instructions: (1) The entry description must specifically indicate or state that the activity is directed towards or is aimed at adults or individuals over 18 years of age. (2) The entry description must indicate the ages or type of adult group (e.g., parents) to whom efforts are directed. (3) If the activity is related to alcohol consumption or underage drinking, individuals 21 years of age or younger can be considered youth. For alcohol related activities to include individuals under 21 as youth, the activity cannot also target individuals (adults) over 21 years of age. (4) Activities that support the workforce or professionals/workers are considered to be directed towards adult workers, or individuals 18 or older.

c. Example: A parenting program, Strengthening Families, was offered for the first time for parents of youth in the juvenile detention center. [This is an example because the program is for parents (adults). See B.2.b.2.]; A retailer training program was held for convenience store clerks to help them better ID youth attempting to purchase cigarettes in the store. [This is an example because the program is for parents (adults). See B.2.b.4.]

d. Non-example: A new curriculum, Positive Action, was taught in 9th grade at Eisenhower High School for the first time [This is a non-example because the grade level and school type is identified in the description. See B.1.b.1.]

3. *All community members, including both children, youth and adults of any age* ***(Targeted age not specified)***

a. Definition: Any activity that includes or is directed towards multiple or all age segments of the community or the community in general. Includes activities directed towards both children/youth and adults.

b. Instructions: (1) The entry description must indicate that the activity is directed towards or aimed at both adults and individuals over 18 years of age. (2) If the entry description does not directly specify or indicate a specific age group(s) or classification (e.g., parents, students, workforce) the activity is directed, the activity is considered to be directed towards all community members, regardless of age. (3) If an activity includes or informs both children/youth and adults, the activity is considered to be directed towards all community members. For instance, an informational letter was sent home by students to parents warning them of underage drinking parties in the

community. (4) Activities that support the workforce or workers are considered to be directed towards adult workers, or individuals 18 or older.

c. Example: A training was held for prevention professionals to train workers on the warning signs or early identification of substance use among youth [This is an example because the program is for professional workers (adults). See B.3.b.3.]

d. Non-example: A new curriculum, Positive Action, was taught in 9th grade at Eisenhower High School for the first time [This is a non-example because the grade level and school type is identified in the description. See B.3.b.2.]

D. Behavior Change Strategy: The method or broad type of intervention component used to help support the target group in achieving the identified goal(s).

1. *Providing Information and Enhancing Skills*

   a. Definition: To supply or make knowledge available through the dissemination, distribution or communication of knowledge or facts related to the prevention of substance abuse. Includes opportunities to practice and apply knowledge to increase competency for preventing or reducing the problem behavior.

   b. Scoring Instructions: (1) Includes activities to provide information to prevent or reduce substance abuse (e.g., fairs, booths, seminars). (2) Includes skill development activities that provide opportunities to practice the desired response(s) (e.g., peer refusal training). Skill development programs should be categorized by the strategy “providing information and enhancing skills”. (3) Includes information provision through both one-way communication (e.g., distribution of literature) and two-way communication (e.g., training, workshop) channels. (4) Includes activities to support mass distribution or dissemination of information to prevent or reduce substance abuse through media outlets. Includes promotional activities (e.g., floats) to increase awareness of substance abuse prevention efforts and activities. (5)Cannot be scored as any of the other behavior change strategies. Do not categorize an activity by this strategy if information dissemination or skill enhancement is an element of another (stronger) behavior change strategy (e.g., enhancing services and support, changing consequences) that is used to implement an activity. (6) Examples include educational presentations, seminars, forums, and workshops, web-based communication, providing Technical Support to community organizations, etc.

   c. Example: (1) A booth was provided by the coalition at the local fair about the consequences of adolescent drug use. Substance abuse prevention brochures were distributed by coalition members to visitors of the booth. [This is an example of information dissemination. See D1b1]; (2) The second session of Strengthening Families, was offered for the first time for parents of youth in the juvenile detention center. Strengthening Families is a 10-session program that supports skill development for parents. [This is an example of a skill-enhancement program for parents. See D1b2]

d. Non-example: (1) A tutoring program was established at the local middle school with a faith-based partner who is willing to provide weekly tutors for one semester. [This is a non-example because the tutoring program with the faith-based partner is implementation of a service program. See D1b5];

2. *Enhancing services and support*
   a. Definition: Increasing, improving or expanding assistance to serve or help the target group engage in desired/healthier behaviors related to the identified goal(s).
   b. Scoring Instructions: (1) Includes activities providing direct service delivery to the target group (e.g., school-based curriculum), when another more appropriate strategy cannot be identified; (2) Includes implementation of service programs (e.g., mentoring program), except skill enhancement programs, which should be categorized as the strategy "providing information and enhancing skills"; (3) Includes activities that provide increased social supports and assistance. New collaborations provide increased social supports that makes it more likely to achieve the intended goal (i.e., increase in desired/healthier behavior/outcome); (4) Cannot be more appropriately scored as any of the other (stronger) behavior change strategies including modifying access, barriers and opportunities, changing consequences or changing policies.
   c. Examples: (1) A tutoring program was established at the local middle school with a faith-based partner who is willing to provide weekly tutors for one semester. [This is an example because the tutoring program with the faith-based partner is implementation of a service program. See D2b2.]; (2) Police Chief has agree to join the local coalition and now regularly attends coalition meetings, which will increase collaboration on reducing underage alcohol consumption. This is the first time a law enforcement officer has committed to active involvement as a coalition partner on an ongoing basis. [This is an example because the tutoring program with the faith-based partner is implementation of a service program. See D2b2.];
   d. Non-example: (1) The Positive Action Curriculum was adapted to Spanish and offered in the schools in Spanish for the first time. This is not categorized as "enhanced services and supports" because a barrier was removed (translated into Spanish) and increased access to the program will now be available; therefore, it is more appropriate scored as "modified access, barriers, and opportunities." See D2b4.]

3. *Modifying access, barriers, exposures, and opportunities*
   a. Definition: Changes in community conditions or in the environment that make it easier for the target group to engage in the desired/healthier behavior (and more difficult for less desired behavior) by changing availability, removing obstacles, or increasing the chance or likelihood to support the desired behavior.
   b. Scoring Instructions: (1) Includes activities that increase access to services; (2) Includes activities that create fewer/more opportunities for engagement or participation in activities related to the goal area (e.g., extend service hours); (3)

Includes activities that remove obstacles or barriers to using services; (4) Includes activities related to the redesign of the physical environment (e.g., change in zoning); (5) If increased access, removal of barriers or increased opportunities to engage in the activity is necessary before a service can be provided or expanded, then an activity should be categorized as "modifying access, barriers, and opportunities". (6) The scorer should be able to identify or name the barrier removed, or the type or access and opportunity provided. (7) Cannot be more appropriately scored as any of the other (stronger) behavior change strategies including changing consequences or changing policies.

c. Example: (1) The Youth Community Coalition and Boone County Sheriff's Department hosted a prescription drug take back event in 7 locations in Boone County to provide a central location for members to take their unwanted drugs for incineration. [This is an example because the availability of locations to drop off drugs removed barriers to safe disposal of prescription drugs. D3b3.]; (2) The Positive Action Curriculum was adapted to Spanish and offered in the schools in Spanish for the first time. This is categorized as "modified access, barriers, and opportunities" because a barrier was removed (translated into Spanish) and increased access to the program is now available; therefore, it is more appropriate scored as "modified access, barriers, and opportunities". See D3b5.]

a. Non-example: The Positive Action Curriculum was offered in a new school, Eisenhower Middle School, for the first time. [This is a non-example because the program is being expanded to be offered in a new location. See D3b5.]

4. Changing the consequences

a. Definition: Modifying the results or occurrence of conditions to make it easier and/or more rewarding to engage in the desired/healthier behavior (and more difficult for less desired behavior).

b. Scoring Instructions: (1) Includes activities to provide incentives (e.g., rewards, recognition) for engaging in desired/healthier behaviors or disincentives (e.g., punishment, fines) for engaging in less desired behavior. (2) If "changing the consequences" is necessary to increase participation in a service, then an activity should be categorized as "changing the consequences". (3) The scorer should be able to identify or name the consequence (result) related to the behavior. (4) Cannot be more appropriately scored as changing policies.

c. Example: Local volunteers that supported the coalition this year were listed in the local newspaper and received a $20 gift card at the Annual Coalition Awards Banquet. [This is an example because it provides recognition and reward for volunteering. See E4b1.]

d. Non-example: The District Attorney approved a policy, which mandated an $800 fine and Retailer Trainer for retailers that are caught selling alcohol to minors. [This is a non-example because there is a formal policy that supports the consequences for serving alcohol to minors. See D5b2.]

5. *Modifying policies and broader systems*

a. Definition: Formal change in written procedures, proclamations, rules or laws with written documentation and/or voting procedures, to support activities or efforts to address the mission.
b. Scoring Instructions: (1) The activity should have some formal evidence, which is either written (e.g., written policy) or has written evidence of verbal agreement (e.g., minute meetings). (2) If the enforcement of a consequence is based on the establishment of a policy or procedure, then the activity should be categorized as "modifying policies and broader systems".
c. Example: (1) A Drug Endangered Children Protocol established by the coalition was signed into agreement by the District Attorney. [This is an example of a formal procedure to handle meth-related cases involving children. See D5b1.]; (2) The District Attorney approved a policy, which mandated an $800 fine and Retailer Trainer for retailers that are caught selling alcohol to minors. [This is an example because there is a formal policy that supports the consequences for serving alcohol to minors. See D5b2.]
d. Non-example: The second session of Strengthening Families, was offered for the first time for parents of youth in the juvenile detention center. Strengthening Families is a 10-session program. [This is a non-example because the program is for parents (adults). See B.1.b.1.]

E. Duration: The expected timeframe that an activity or event is intended to be continued or maintained.

General Scoring Instruction for Duration: The observer scores the activity or event based on the most appropriate category for duration.

a. A new collaboration, is typically scored as more than once, unless specified in the entry description that it is one-time or ongoing.
b. A program is typically scored as more than once in duration.
c. A policy is scored as ongoing in duration.

Specific Scoring Instructions for Scoring Categories:

1. *One-time Event*
   a. Definition: Activity projected to only occur once and is not intended to be continuous or ongoing.
   b. Scoring Instructions: (1) If the duration of the event is not indicated in the entry description, then the activity is considered to be a one-time event.
   c. Example: A booth was provided by the coalition at the local fair to disseminate information about the consequences of adolescent consumption of alcohol. [This is an example because there was no indication that the activity would be repeated again in the future. See E.1.b.1.]
   d. Non-example: The second session of Strengthening Families, was offered for the first time for parents of youth in the juvenile detention center. Strengthening Families is a

10-session program. [This is a non-example because the program is projected to recur for a specified period of time in the future.]

2. *More than Once*
   a. Definition: Activity that is projected to occur more than once but for a finite number of times (e.g., 16-session class, 10-week activity) or expected length of time (e.g., annual event).
   b. Scoring Instructions: (1) A recurring program or activity that occurs for a specific numbers of sessions or length of time, with a specified end date is considered to occur more than once. (2) A new collaboration, should be typically scored as more than once, unless otherwise indicated. (3) An activity is scored as “more than once”, if there is some indication that the activity is recurring, but does not have a specified end date (e.g., “PSAs on risks and effects of substance use are aired on a regular basis”). (4) A program is generally considered to occur more than once, unless specified in the entry description.
   c. Example: (1) A new curriculum, Positive Action, was taught in 9th grade at Eisenhower High School for the first time. This was the first session of a 142-session program. [This is an example of more than once because the program recurs for a specific number of times, but not indefinitely. See B2b1]; (2) A mentoring program was established at the Boys and Girls Club based on a partnership between the coalition and the Boys and Girls Club. [This is an example of a program. See E2b4.];(3) Billboards
   d. Non-example: A booth was provided by the coalition at the local fair to disseminate information about the consequences of adolescent drug use. [This is a non- example because the description does not indicate the activity is for a specific period of time (e.g., annually). See E2b1]

3. *Ongoing*
   a. *Definition:* Activity that is expected to continue over an indefinite period of time (e.g., a change in a clinic’s service hours, the adoption of district-wide substance abuse testing requirements for athletes).
   b. Scoring Instructions: (1) Policy change is considered ongoing in duration. (2) Changes to the physical environment are considered ongoing (e.g., walking trail, zoning change).
   c. Example: A social hosting policy was enacted to provide consequences for parents who provide alcohol at a party for youth. [This is an ongoing policy change. The policy is intended to continue into perpetuity. See E3b1]
   d. Non-example: A tutoring program was established at the local middle school with a faith-based partner. [This is a non-example because a program is considered to occur more than once.]

E. Reach: The number of individuals in the community that are likely to be impacted by the activity or event.

1. *Activities likely to reach 21% and greater of the targeted community*

   a. *Scoring Instructions:* (1) Policy change is considered to reach >21% of the population. (2) Mass media broadcasts (i.e. television, radio, and internet) also fall into this category.
   b. *Example:* Channel 21 News reported on the results of the alcohol sting operation that was conducted by the Safe Streets Coalition. [The number of individuals reached by the media report is likely at least 21% of the county population.]
   c. *Non-Example*: The Safe Streets Coalition presented on the consequences of underage drinking to a class of students at Englewood High School. [The number of individuals reached in the activity is most likely less than 5% of the county's population.]

2. *Activities likely to reach between 6-20% of the targeted community.*
   a. *Scoring Instructions:* (District-wide policy changes are considered to reach between 6-20% of the population.
   b. *Example:* The Shawnee School District Superintendent approved the measure to implement the Positive Action curriculum in all SSD middle schools. [This is an example because the school district can be reasonably expected to include at least 6% (but not more than 20%) of the population. In the case of Shawnee County, that is between 12,500-49,800 individuals).
   c. *Non-Example*: The Safe Streets Coalition presented on the consequences of underage drinking to a class of students at Englewood High School. [The number of individuals reached in the activity is most likely less than 5% of the county's population.