Examining the Effectiveness of the Strategic Prevention Framework on Underage Drinking Prevention in Kansas Communities

By

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Abstract

Underage drinking is a serious public health problem in the Unites States. Alcohol is the most misused substance by youth under 21 years of age. In the past few decades since the passage of the Minimum Legal Drinking Age Act in 1984, several federally funded underage drinking prevention interventions have been implemented in the United States. Extensive research has been conducted on the topic including causes, consequences and mediating factors that result in high levels of underage drinking. The Substance Abuse and Mental Health Services Administration (SAMHSA) and the Center for Substance Abuse Prevention (CSAP), both federal agencies that oversee prevention of substance use problems in communities, have promoted the use of community-based strategies, including the Strategic Prevention Framework (SPF) as a theoretical model. This dissertation study uses a behavioral community approach to examine the effects of implementing the Strategic Prevention Framework (SPF) as a model to prevent underage drinking in seven Kansas communities. A multiple baseline study design with seven communities was used to examine the effectiveness of SPF implementation in reducing underage drinking outcomes in Kansas. Study findings indicate that the SPF implementation may have contributed to reducing underage drinking prevalence in treatment communities in which program, policy, and practice changes were implemented for a considerable period. All intervention communities had a decrease in prevalence and an increase in capacity, but there was variability in the results. The SPF also resulted in increased capacity and community readiness for change to implement underage drinking prevention interventions. These findings have implications for coalitions and funding agencies to understand the conditions under which underage drinking interventions are effective.

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Underage Drinking in the United States

Alcohol is the most frequently used substance by youth in the United States. In 2018, 7.1 million people ages 12-20 reported that they drank alcohol beyond "just a few sips" in the past month (Miech et al., 2019). The 2017 Youth Risk Behavior Surveillance Survey (YRBSS) found that during the past 30 days, as many as 30% of high school students drank some amount of alcohol, 14% binge drank, and 6% were involved in driving under the influence of alcohol. Binge drinking refers to a pattern of drinking in which the blood alcohol concentration exceeds 0.08g/dl, which is when males consume five or more drinks in a row and females consume four or more in about 2 hours (Chung, T. et al., 2018). At least, 17% reported riding with a driver who had been drinking alcohol (Kann et al., 2017).

Drinking alcohol at an early age not only adversely impacts health, but also has economic implications. Health implications include disruptions in brain development and reduced capacity to make decisions due to early initiation of alcohol. In addition, it also increases vulnerability to negative behavioral consequences (Silveri, 2012). As a social implication, people who drink more frequently are more likely than those who do not engage in behaviors that pose a risk to their health and the health of others. A serious social consequence of underage drinking is traffic crashes. According to the National Highway Traffic Safety Administration (NHTSA) in 2018, there were 10,511 deaths from drunk driving crashes. Economic evaluations of underage drinking estimate that $24 billion were spent in 2010 in the United States for underage drinkers (CDC, 2019). Loss of workdays due to health concerns caused by alcohol consumption also has financial consequences for individuals and employers.

Trends in Alcohol Prevalence

Data from the 2019 Youth Risk Behavior Surveillance Survey (YRBSS) indicate that nationally, among high school students, current alcohol use was the highest (29.2%) among all substances (Jones et al., 2020). In addition to current alcohol use, binge drinking was also reported at 13.4%. Females reported significantly higher current alcohol use and binge drinking compared to males (31.9% compared to 26.4%; 14.6% compared to 12.7%). With respect to racial and ethnic groups, it was noted that current alcohol use was lower among Black students (16.8%) compared to White (34.2%) and Hispanic students (28.4%). Alcohol use also varied by age. Students from higher grades such as 11th and 12th grades, reported higher use compared to students in the 9th and 10th grades. Students who identified as lesbian, gay, or bisexual had a higher prevalence compared to students who identified as heterosexual.

While current alcohol use had a high prevalence, it was observed that the prevalence has decreased considerably in the years from 2009-2019. National and local trends did not show a statistically significant decrease since 2017, suggesting that local trends are similar to national data. Similarly, with respect to frequency of use, it was noted that most respondents (54.8%) reported using alcohol only for 1-2 days in the past 30-days, about 36.6% of respondents reported using alcohol for 3-9 days and 8.6% of respondents reported using alcohol for 10 or more days (Jones et al., 2020).

Local Trends in Alcohol Consumption

During 2017-2019, the prevalence of past month alcohol consumption among youth (12-17) years in Kansas was 10.4% (SAMHSA, 2020). In 2002-2004, the prevalence was nearly double at 20.6%. It may be noted that annual alcohol use decreased considerably in the years since 2004. The current prevalence is in line with regional and national averages for the same indicator.

Implications for Current Research

National trends in alcohol use suggest that while a decreasing trend is observed, prevalence is considerably high compared to other substances. Students in 11th and 12th grades, especially females, and students who identify as gay, lesbian or bisexual are at higher risk. Past 30-day alcohol use is clearly a target behavior with the goal of reducing harm by reducing the frequency of alcohol consumption. While alcohol use patterns suggest that prevalence is decreasing, there are gaps in data about prevalence of risk factors in Kansas communities. Addressing risk factors as antecedent conditions is important to avoid replacing alcohol use behavior with another substance or similar behavior that is potentially just as harmful.

Underage Drinking Prevention

For the past three decades, the response to underage drinking prevention has centered around identifying effective prevention strategies. Efforts to prevent and reduce underage drinking in the United States can be traced back to 1984 when the National Minimum Drinking Legal Age (MLDA) Act was passed. Much of the early work in underage drinking prevention was instructional in nature and focused on the individual (Harding et al., 2016). As promising environmental approaches to preventing underage drinking emerged, the focus of interventions shifted to being more community-based and targeted communities or groups of individuals. Some of the pioneering work in this era included theoretical advances in community-based participatory research (Israel, Schulz et al., 1998), the application of the socio-ecological model (Bronfenbrenner, 1979) to prevention, and examining the effect of the environment (especially risk and protective factors) (Hawkins & Catalano, 1992) on human behavior. These approaches have been widely investigated and extensively reported in literature in the 1990s and early 2000s and provided the foundation for hybrid models such as the Strategic Prevention Framework

(SPF). The major theoretical frameworks that undergird underage drinking prevention interventions are discussed below.

Theoretical Models in Underage Drinking Prevention

Over the last three decades, underage drinking prevention research has used evidence-based theoretical approaches as a foundation for intervention implementation in communities. The most prominent among the models is the socio-ecological model (Bronfenbrenner,1979) and the social development model (Hawkins & Catalano, 1992). Both models provided the conceptual basis for more specific research to support approaches for addressing a variety of public health issues such as obesity prevention, violence prevention and physical activity promotion.

Ecological Model

The socio-ecological model is a theory-based framework for understanding the complex effects of personal and environmental factors on individual behaviors. It was conceptualized in the 1970's as a model for understanding human development (Bronfenbrenner, 1979). In the original model, the author proposed that an individual's growth and development are heavily influenced by the environments in which they live and interact, which was referred to as ecosystems. The microsystem or the immediate environment; the mesosystem or connections with others; the exosystem or the indirect environmental influence on those with whom we interact; the macrosystem or the social and cultural values that drive the environment; and the chronosystem examines changes over time.

In health promotion, the commonly accepted levels of the socio-ecological model are individual, interpersonal, organizational, and societal (Golden & Earp, 2012). Individual factors include biology, history and other personal factors that increase the probability of engaging in

risky behaviors. Interpersonal factors include interactions with others including peers and family members. Neighborhood & community factors focus on the role played by organizations such as schools and workplaces. Community factors are at the societal level such as neighborhood/community climate and context that encourages or inhibits underage drinking. Policy, systems, and society refers to broad population-level influences that modify laws and policies benefiting everyone in the community.

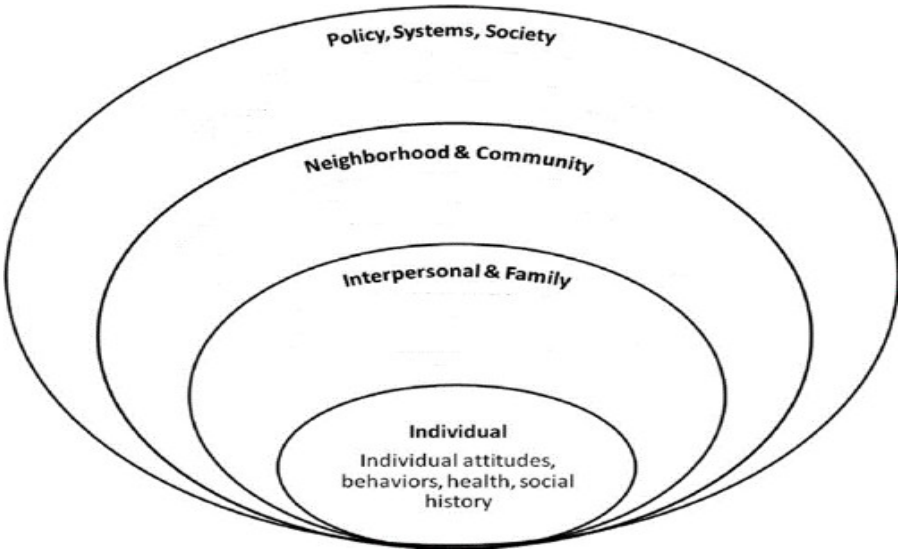

Figure 1: Ecological Levels

Some studies that utilized the ecological model to design underage drinking preventions suggested that there is substantial influence during adolescence at the interpersonal level. Sieving et al. (2000) examined peer influence and peer selection in a group of adolescents and found that higher levels of friends' drug use led to higher levels of participant drug use. The findings suggest that youth select friends who have similar behavior patterns. Stigler et al. (2006) noted that family functioning was the component of their intervention with youth that had most effects on alcohol use, knowledge, and attributes. They noted that classroom curriculum proved moderately effective. Williams et al., (2001) also supported a similar observation noting that

interventions to improve parent-child communication led to greater awareness of problems related to underage drinking. While the socio-ecological model examines the different spheres of influence on human behavior, the social development model posits that each sphere has specific risk factors or antecedent and consequent conditions that influence a target behavior such as underage drinking.

Social Development Model

The Social Development model (Hawkins & Catalano, 1992) is a framework that can predict anti-social behavior of youth in late adolescence based on their behavior and exposure to certain environmental factors in childhood or early adolescence. The model is based on the premise that the presence of certain indicators increases the risk of anti-social behavior and other related risk factors. On the other hand, indicators called protective factors mediate or moderate the effect of these risks, even when they are present (Hawkins & Catalano, 1996). Among underage drinking prevention interventions, the most common ecological levels targeted were peers (Sieving et al., 2000), families (Miller, Aaolberg et al., 2012), schools (Perry, Lee et al., 2007; Williams, Grechanaia et al., 2001) and communities (Moore, Roberts et al., 2012), with less focus on individual-level factors. Results of these interventions suggest that reducing risk factors even in the short-term leads to gains in underage drinking outcomes. For instance, Project Northland (Perry, Lee et al., 2007) had a significant impact on positive changes in students' family problems and drug-use proneness. Moore et al., (2012) concluded that a reward and reminder strategy to prevent the sale of alcohol to minors without requesting identification was reduced to 0% from a baseline of 33%. Williams, Grechanaia, et al., (2001) found evidence that an intervention to improve parent-child relationship among youth in schools resulted in increased

parent-child communication and changes in knowledge about problems associated with underage drinking.

Other Theoretical Frameworks

The social learning theory (Bandura & Walters, 1977) proposes that new behaviors can be acquired by observational learning through imitation. "Motivation" is described as an intermediary (cognitive) process that occurs after observation and prompts reproduction of the behavior. In contrast, behavioral instructional technologies use techniques such as modeling and feedback and reinforce successful approximations to the target behavior. It is notable that immediate reinforcement of consequence is a vital component of behavioral interventions, and the findings affirm that consequent-interventions are more effective compared to interventions without a consequence.

Chapman (2002) conducted an experiment on the influence of parental characteristics on adolescents' smoking and drinking expectancies. It was based on social learning theory and findings revealed that parenting characteristics do affect substance use by adolescents. Lipperman-Kreda et al. (2010) conducted an inductive study based on the social learning theory to understand how community norms, enforcement of minimum legal drinking age laws and personal beliefs interacted to influence adolescents' drinking habits. The study found that local enforcement of underage drinking laws influenced community norms, which in turn influenced parents' disapproval of underage drinking and individual's perception of alcohol use. These findings iterate the importance of reinforcing the desired behavior.

SAMHSA's Role and Approach to Underage Drinking Prevention

The Substance Abuse and Mental Health Services Administration (SAMHSA) was established in 1992, to lead the country's effort in substance abuse prevention. It is the agency

within the Department of Health and Human Services (HHS) that oversees public health efforts to prevent underage drinking and substance use. It does so by providing funds to the states to promote behavioral health and prevent underage drinking and substance abuse.

Based on previous research, the Substance Abuse and Mental Health Services Administration (SAMHSA) developed the Strategic Prevention Framework (SPF) in 2006 to help interventionists understand behavioral problems in the community context. In addition to SPF, SAMHSA also adopted both the Institute of Medicine's (IOM) framework for classification of reach and the Center for Substance Abuse Prevention's (CSAP) strategy classification of interventions by type to examine substance abuse prevention interventions. The Strategic Prevention Framework, IOM strategies and CSAP strategies are discussed.

Strategic Prevention Framework

The SPF includes the following five phases of Assessment, Capacity, Planning, Implementation and Evaluation, which is then supported through Cultural Competence and Sustainability as integrated phases within all the stages. The SPF was developed as a theoretical framework to aid communities receiving federal funds to implement evidence-based interventions to prevent underage drinking. The phases work interactively and iteratively to promote cultural competency and sustainability of prevention efforts in the community. The SPF offers a structured (with well-defined activity phases) and data-driven approach that explicitly targets environmental conditions in the community and aims for change in substance use and related problems at the population-level.

Findings from Studies Using the SPF Approach. Few studies have examined the effectiveness of the Strategic Prevention Framework in influencing underage drinking outcomes in communities. In a study to examine the effectiveness of SPF in improving underage drinking

outcomes in communities, Anderson-Carpenter et al. (2014) concluded that the implementation of the SPF model enhanced coalitions' knowledge about underage drinking and understanding (e.g., capacity building activities, training, dissemination materials) to facilitate community changes and improvements related to underage drinking outcomes. Peterson et al. (2019) found that stronger coalition leadership and sense of community were associated with effectiveness of the coalition in implementing policy changes. In another study to evaluate the effect of SPF on binge drinking outcomes, Anderson-Carpenter et al. (2016) concluded that SPF implementation supported improvements in binge drinking and law enforcement outcomes over time, although there were no significant differences in improvements between intervention and matched comparison groups. In a study conducted in Eau Claire, Wisconsin, researchers found that there was a significant improvement in alcohol use outcomes. SPF implementation led to an 8.6% decline in past-month alcohol use and a 20.5% decline in ease of alcohol access in this community (Eddy et al., 2012).

IOM Strategies

Gordon (1983) proposed a classification of disease prevention that further refined the traditional categories of primary and secondary prevention to further understand interventions occurring before and after the onset of disease. The author describes prevention as "measures adopted by or practiced on persons not currently feeling the effects of a disease, intended to decrease the risk that the disease will afflict them in the future" (Gordon, 1983, p.109). Given that there were some disadvantages in the previous system of classification, a set of strategies were proposed that were grouped by the target population reached. According to Gordon (1983), prevention measures are applicable to persons who are not currently suffering (primary prevention) and can be classified based on the target populations reached. The most used type are

universal strategies that reach the general population. The costs of a universal intervention are high, but the benefits are that it can be safely recommended for all people and prevent the onset of problem behavior. Eating nutritious food, getting vaccinated, and avoiding alcohol consumption until 21 years of age are examples of universal precautions. Selective strategies are aimed at individuals who are at higher risk of acquiring the condition. An intervention for children of parents who have a history of substance abuse may be an example. Indicated strategies are the third category and are catered to people who already show symptoms or have acquired the condition. Indicated interventions support individuals in undergoing minor treatment to prevent or reduce the effects of a future condition.

Findings from Studies Implementing IOM Strategies. Universal interventions typically targeted children in schools and their parents irrespective of the individual risk to consume alcohol (Williams et al., 2001 & Perry et al., (2007). Intervention strategies at the universal level included classroom- based curriculum, parent information sessions and media campaigns (Abatemarco et al., 2004). Selective strategies targeted individuals known to be at higher risk of engaging in alcohol consumption. Studies that used selective strategies had participant inclusion criteria that identified people at higher risk due to their racial and ethnic background. Youth from racial and ethnic minorities are at higher risk of early alcohol use due to their higher exposure to risk factors (Wallace & Muroff, 2002). Truong & Sturm (2017) found that alcohol outlets in California are concentrated near residences of minority and low-income families. Availability of alcohol is one of the major risk factors that promote early alcohol initiation. Therefore, youth from racial and ethnic minorities and parents of Hispanic children may be appropriate for selective targets in neighborhoods of concentrated retail outlets (e.g., liquor stores) that may increase availability of alcohol.

CSAP Strategies

SAMHSA/CSAP promotes the following six strategies for drug use prevention in communities (Institute of Medicine, 1994). The strategies can be categorized within the broader IOM strategy classifications as noted in the table. Based on the definitions provided for reach and classification, CSAP strategies can be classified as indicated in the table.

Table 1: CSAP Strategies

CSAP Strategy	Definition	IOM Strategy Level Prioritized	Examples
Information Dissemination	Activities that increase awareness of an issue in the community and are characterized by one-way universal flow of information from source to recipient.	• Universal	Media communication campaigns, health fairs, billboards, brochures. When the audience is the general population, and everyone receives the communication the IOM strategy may be "Universal."
Prevention Education	Activities that provide knowledge and skills to the target audience. It is usually conducted in a classroom format and allows for interaction between presenter and student.	• Universal • Selective	Evidence-based classroom curriculum for middle school and high school students. Parent and family education classes. Curriculum for students that do not assess risk are "universal "in nature
Drug-free alternatives	Constructive leisure activities that provide an alternative to alcohol for youth.	• Universal	Youth leadership groups, family movie night, game night for the community
Environmental	Activities that seek to change community norms and laws related to underage drinking.	• Universal	DUI Law enforcement measures Retailer citation Laws against Social hosting
Community-based process	Community building activities that build community capacity to implement and sustain interventions	• Universal	Multisector collaboration, capacity building initiatives, assessment of community perceptions and norms

Problem Identification and Referral	Activities that help identify youth who engage in illegal activity/first time drug use and assess if their behavior can be reversed through education.	• Indicated	Driver education classes for DUI offenders, classes for employees with history of alcohol use; student referral program for alcohol possession by minors. Problem Identification & Referral is an "Indicative" strategy.

Findings from studies implementing CSAP Strategies. Interventions that serve small groups of populations may be able to improve indicators or mediating variables but may not have a significant impact on population-level outcomes for the problems they are designed to address. Therefore, it is important to consider environmental strategies within a mix of intervention activities implemented in communities (Flewelling, 2009). Interventions that implemented environmental strategies in addition to other strategies such as prevention education, showed that community norms were changed, thereby impacting perceptions of youth regarding consumption of alcohol, which in turn reduced alcohol consumption. Environmental strategies that involve a penalty such as a fine or revoking of drivers' license contributed to a greater reduction in alcohol consumption compared to general policy changes (Spera et al., 2012). These findings reiterate the importance of an immediate consequence that reinforces or punishes the target behavior. Fawcett (1980) proposed a system of procedures for behavioral community technologists which included behavioral instructional technologies, behavior management methods and environmental design procedures. Instructional technologies utilize methods such as modeling and feedback to improve behavior. Behavior management methods are based on the principles of contingent reinforcement and environmental design procedures that may modify the built

environment to facilitate behavior change. These behavior- change strategies complement CSAP strategies.

Prevention education was widely used as a sole strategy compared to drug-free alternatives and problem identification that were always used in conjunction with prevention education and environmental strategies. Studies utilizing prevention education were able to improve outcomes related to knowledge and awareness of problems associated with underage drinking and reduce self-reported attitudes and perceptions for consuming alcohol in the future, but little is known about whether these interventions impacted alcohol use behavioral outcomes (Abatemarco et al., 2004; Baydala et al., 2009; Conigrave et al., 2012).

Studies using information dissemination had mixed results. Information dissemination interventions were successful in altering perceptions about harm. Flynn et al., (2006) found that mass communication campaigns did not have any effects on adolescent alcohol use and mediating variables. Koutakis (2008) on the other hand was able to observe changes in parental attitudes against underage drinking and reduced consumption of alcohol by youth. Interventions implementing environmental strategies noted changes in environmental risk factors or mediating variables that affect underage drinking outcomes. Flewelling et al., (2013) found that interventions among retailers were effective in reducing likelihood that retail clerks would sell alcohol to minors but did not reduce alcohol consumption or perceived availability of alcohol. In addition to behavioral changes environmental interventions also resulted in increasing community readiness and capacity. Spera et al., (2012) found that although there was not a cause-and-effect relationship for implementation and outcomes, community capacity for implementation increased considerably.

Other Complementary Frameworks: IOM Framework for Collaborative Public Health Action in Communities

Another complementary approach to the Strategic Prevention Framework is the IOM Framework for Collaborative Public Health Action in communities (IOM, 2003). While the SPF was developed primarily, as a model for substance use prevention, the IOM model has more generality as an approach to address a variety of community issues. Given the more limited studies examining the effectiveness of SPF in multiple communities, it may be helpful to examine the implementation of comprehensive interventions to build evidence of effectiveness of multicomponent community prevention approaches.

The IOM framework has five components:(a) Assessment and collaborative planning; (b) Implementing targeted action; (c) Changing conditions in communities and systems; (d) Achieving widespread change in behaviors; and (e) Improving population health and equity (IOM, 2003). The sequential and interactive framework promotes community participation and collaboration in addressing public health outcomes. It is important to change conditions in communities and systems by modifying aspects of the environment that contribute to widespread behavior change to improve a health outcome. The Community Change framework suggests that improvements in population-level health outcomes may be expected when Community Changes are of greater (a) amount (i.e. number of Community Changes reported); (b) intensity (i.e., use of behavior change strategies beyond information and skills training, attention to risk/protective factors and model components); (c) duration (i.e., length of time the changes remain in place); and, (d) exposure (i.e., delivery through relevant community sectors to reach target groups in a particular locale) (Roussos & Fawcett, 2000). The contribution of Community Changes to reducing underage drinking outcomes is more likely when there are sufficient programs, policies

or practices that target salient risk and protective factors; use more intensive behavior change strategies and are in place long enough to have an impact by being widely distributed throughout the entire target area (Anderson-Carpenter, 2014).

Characteristics of Effective Underage Drinking Prevention Interventions

In a review of community-based adolescent alcohol prevention efforts, Fagan et al., (2011) found that interventions that demonstrated reductions in alcohol use or alcohol availability among youth relied on local coalitions to select effective interventions and implement them with fidelity. Second, the inclusion of a prevention education curriculum as part of community-based prevention efforts was associated with reductions in alcohol use among middle and high school students. Third, environmental strategies focused on changing laws and norms did not reduce alcohol use among youth when implemented independently of other community-based strategies. However, when environmental strategies were part of successful multi-component interventions, reduced availability of alcohol in communities was observed and the rate of drunk driving arrests among young adults was lowered.

Spoth et al., (2008) found evidence for interventions that met "most promising" or "mixed and emerging" criteria for prevention interventions. In a review of the literature, the nature and extent of the current evidence on preventive interventions addressing underage drinking was clarified. The application of community-based participatory models for intervention research and development, to maximize public health impact was recommended. Their review, among others (Hawkins & Catalano,1996; Gorman & Speer, 1996; Aguirre-Molina & Gorman, 1996), pointed out the need for further research on intervention domains (e.g., family, school, community & media) and the critical importance of addressing key issues in

research design and methods (e.g., limited longitudinal studies, replication studies and dissemination research) and the need for culturally competent interventions.

For instance, Foxcroft & Tsertvadze (2012) found that generic psychosocial and life skills programs based in schools were helpful in lowering alcohol use among youth. However, in designing life skills programs and curriculum around substance use prevention, Hecht, Marsiglia et al., (2003) found that culturally grounded curriculum helped achieve overall effectiveness and statistically significant difference in drug use norms and attitudes. There is a need to systematically examine not only the study domains and the associated outcomes being addressed, but also the effectiveness among culturally different target populations.

Analyses of settings and context in which programs were conducted revealed that most studies were conducted in community settings, in schools, or at home. Some studies also used communities or retail stores as a unit of analysis. In studying the impact of environmental interventions or longitudinal effects of sustained interventions, using communities as a unit of analysis may be helpful to understand broader scope, and macro-level changes instead of program success only. Intervention studies also targeted racial and ethnic minority youth and identified unique challenges in perceptions (e.g., acculturation stress in Hispanic youth) and environmental conditions (e.g., alcohol outlets concentrated near residences of racial and ethnic minority youth) that interact with intervention effects.

Evidence-based strategies

Evidence-based strategies refer to interventions that have been rigorously evaluated for effectiveness, have had multiple trials, and proven to be effective in improving outcomes. Some characteristics of evidence-based strategies include a strong theoretical basis and a phased approach from planning to evaluation.

Adapting interventions to be culturally competent seemed to be a top concern among studies that replicated evidence-based strategies. Although evidence-based strategies such as Life Skills have proven to increase knowledge of alcohol related effects among schools-aged youth, there is a need for culturally adapted interventions (Hecht, Marsiglia et al., 2003) when targeting specific populations such as Aboriginal people (Baydala et al., 2009). Additionally, when choosing an appropriate curriculum for family management, it is important to consider parents' choices. Parents' preferences for structured and unstructured curriculum depend on their children's exposure to risk for underage drinking (Miller et al., 2012).

Komro et al., 2008 found that replicating an evidence-based intervention in a different cultural context after adaptation did not yield comparable results. Studies that targeted people from racial and ethnic minority groups were markedly different in that these studies incorporated an element of culture in the prevention education curriculum or pointed out the need for more culturally adapted interventions (Baydala et al., 2009). Additionally, interventions that served racial and ethnic minorities studied the mediating effect of "culture" on the consumption of alcohol among those youth. For instance, Ma et al., (2017) found that Hispanic youth who have high interpersonal control and respect for elders have lower tendency to consume alcohol. These are mediating variables specific to a certain culture.

Multi-Component Interventions

Although the relative effectiveness of multi-component over single component interventions has not been well-established, there is a growing acceptance of the effectiveness of prevention education strategies in combination with environmental and information dissemination strategies. Universal interventions that target the entire population may be preferred because of the broader reach and ability to impact population-level outcomes. Whereas

interventions that serve specialized populations may be able to improve outcomes on mediating variables but will not have a significant impact on population-level indicators (Flewelling, 2009). Another factor that favors adoption of certain strategies such as Information Dissemination and Prevention Education compared to others may be the availability of evidence- based interventions. While there is support for evidence-based interventions using information dissemination and prevention education, there is limited knowledge about evidence-based interventions that utilize drug-free alternatives and problem identification and referral strategies. These findings suggest that there is a need to gather evidence for promising intervention strategies other than information dissemination and prevention education and then systematically measure the relative effectiveness of strategies to impact outcomes.

Intensity of Interventions

Despite the focus on implementing multi-component interventions, little is known about whether this process leads to sustained change in behavioral outcomes. Especially in the case of a multi-community, multi-component, behavioral intervention as proposed by SPF, it is imperative to identify a process to measure the relative effectiveness of strategies to achieve desirable outcomes. The challenge of measuring impact is compounded when it requires sustained effort of multiple stakeholders. The challenge with a multisectoral, collaborative approach is the lack of ability to communicate and document program, policy and practice changes and systematically reflect on the data to make changes (Collie-Akers, 2013).

One approach to measuring intensity of program, policy and practice changes characterized and rated events according to intensity. The dimensions of intensity described in this approach by Collie-Akers (2013) include event duration, population reach and type of strategy. Community and system changes that are sustained over a period and reach as many

people as possible are more likely to impact behavioral outcomes at the population level (Glasgow et al., 1999). Anderson-Carpenter, (2014) examined the association of Community Change intensity with changes in underage drinking outcomes using a slightly modified approach and found a strong and statistically significant correlation between the variables. Although a few studies (Collie-Akers, 2013; Watson-Thompson et al., 2013) have examined the association between intervention intensity and impact on outcomes, more research in varied settings and different issues is required to understand the relationship**.**

Multisectoral Engagement

Interventions to prevent or reduce underage drinking in the community used a community organizing approach to implement changes across multiple sectors of the community. In this review, the commonly engaged sectors were schools, parents, teachers, law enforcement, healthcare institutions, local government, media, and youth. Also, some studies explicitly advocated for more studies to engage traditional and non-traditional community sectors in underage drinking prevention efforts and endorsed the multisectoral approach in which multiple sectors are engaged simultaneously in multicomponent interventions (Anderson-Carpenter, 2014). A multisectoral approach refers to engaging multiple stakeholders working on the same issues by leveraging their individual strengths and resources for collective gain and action.

Most interventions in the community target the “peer” level of the ecological model. In targeting peers, the commonly engaged sectors are schools, parents, and businesses. Many studies implemented interventions involving a single sector (e.g., youth). Beyond youth, parents and teachers were also involved. The need for multisector collaboration, as advocated by some studies, is that program, policy, and practice changes can be sustainable eventually, only if multiple sectors support the implementation within the community (Anderson-Carpenter, 2014).

Given the influence of the different ecological levels on human behavior and the need to target interventions at those levels, it is necessary to develop inter-agency coordination within the community to make sure, strategies are implemented not just at the personal level but also at the environmental level.

Measurement

Alcohol consumption, consequences and mediating variables served as outcome measures or dependent variables for the studies. Most of the primary data collected were through self-reports except for the studies conducted in convenience stores that used direct observation as the method of data collection. Studies rarely used triangulation of data collected to report results. While self-report data may have challenges, instruments have been tested for internal validity and have proven to be reliable across trials.

Research Design

Randomized controlled trials were able to establish cause-effect relationship between dependent and independent variables (Perry et al., 2007; Stigler et al., 2006; Williams et al., 2001). Intervention and matched controls were a commonly used design in multi-component interventions or interventions involving multiple sites (Schinke et al., 2004; Schelleman-Offermans et al., 2014) studying intermediate to long-term outcomes such as progress from drinking to drunkenness or past 30-day alcohol use. In one study that used intervention and control conditions, control communities began implementation of a different program midway through the original study and therefore could have confounded the results (Flynn et al., 2006). Pre and –post-studies were common for studies involving short-term outcomes like knowledge gains, alcohol awareness or parental attitudes (Baydala et al., 2009; Dedobbeleer, 2001; Koutakis et al., 2008).

Some findings based on examining the SPF model (Anderson-Carpenter) highlight the challenges of using a group design with multiple communities. In a group design, the desired effect on outcomes in one community is often masked by the less than desirable effect on another community because outcomes are not homogenous across communities. A single subject design on the other hand, does not mask the process or outcomes but allows for comparison of differences within the group. Therefore, there is a need to supplement more widely accepted statistical methods with single subject research designs to highlight and compare implementation processes across communities.

Local and National Trends in Alcohol Use

Gaps in Research

Despite the strong theoretical foundation and progress made in intervention research related to underage drinking prevention, there are some gaps. First, there are very few studies that have evaluated the effectiveness of SAMHSA's national prevention model (SPF) specifically related to underage drinking outcomes. There were only a few studies that have provided evidence for implementation SPF-SIG (Anderson-Carpenter, 2014, 2016). Although there is evidence of effectiveness, there is a need to address the influence on long-term population outcomes. There is a need to study implementation of multicomponent strategies to understand the frequency and intensity that optimizes change in population outcomes. Change will take place when there are sufficient programs or policies in place; when stronger behavior change strategies are in place and for a longer duration. These findings indicate the importance of longitudinal studies that examine implementation and maintenance of the intervention and its effects. Even those studies that were successful and considered evidence-based were not

sufficiently replicated. Therefore, there is a need to study the effects of multicomponent interventions replicated in multiple communities over a prolonged period.

Purpose of Present Study

The dissertation study examines the impact of the SPF intervention on changes in population and longer-term outcomes related to underage age drinking (UAD), including associated risk and protective factors. Although limited studies have evaluated the SPF for effectiveness in influencing underage drinking outcomes, the evidence from these studies is promising. As a national model for underage drinking prevention, the SPF approach is replicated by prevention efforts throughout the country. Therefore, there is a need to understand not only the effect on outcomes but more importantly, the process of implementation. Implementation science provides a perspective to effective implementation of evidence-based strategies by facilitating conditions to use and institutionalize these practices (Eccles & Mittman, 2006). Studies examining the effectiveness of SPF, have specifically analyzed past-30-day alcohol use, and have studied the impact of the intervention on intermediate outcomes. The present study examines not only the impact on intermediate outcomes but also further distal or longer-term outcomes. Then, the study examines the contextual factors in communities that have facilitated the implementation of the intervention leading to changes in outcomes. Moreover, a multiple baseline design allows for examining the unfolding of the intervention over time compared to only a typical pre-post research design, which can mask more incremental changes and effects. The longitudinal study will also advance understanding of sustainability of prevention efforts in local communities over time. Finally, this study advances previous research about the intensity of the implementation of interventions and associated impacts on population outcomes.

Research Questions

This dissertation will examine the implementation of the Strategic Prevention Framework (SPF) in six Kansas communities participating in the SPF-PFS Initiative. The following research questions will be explored:

1. Did implementing the Strategic Prevention Framework (SPF) influence underage drinking and related outcomes?
2. Did the Strategic Prevention Framework contribute to the capacity and readiness of the community to implement and sustain underage drinking prevention interventions?

Methods

Background and Study Context

The Strategic Prevention Framework – Partnerships for Success (SPF-PFS 2015) program was designed to build on the previous Strategic Prevention Framework- State Incentive Grant (SPF-SIG) & Partnerships for Success (PFS II) programs funded by Substance Abuse and Mental Health Services Administration (SAMHSA). The goal was to address national substance abuse priorities in communities of high need in either of the following areas: (a) underage drinking among persons 12 to 20 years of age; (b) prescription drug misuse among persons aged 12 to 25. The program aimed to bring SAMHSA's Strategic Prevention Framework to the national level by providing funds to states (Substance Abuse Block Grantees - SABG) that had already received SPF-SIG grant, so they could invest in additional prevention infrastructure at the community and state levels. While SPF-SIG focused on underage drinking only, PFS program focused on both Underage Drinking and Prescription Drugs prevention. However, for this study only the Underage Drinking part of the PFS project (PFS-UAD) has been considered for analysis.

Partnerships for Success (PFS) Underage Drinking (UAD)

In Kansas, the grant was awarded to communities with low capacity and high need, through a competitive application process. The goals of PFS (2015) were to take the lessons derived from SPF-SIG and SPF-PFS II to scale and further integrate these tools and processes with demonstrated effectiveness in Kansas communities (PFS II RFA, 2012). Over the past decade, there has been consistent funding in Kansas directly supporting substance abuse prevention efforts through local coalitions based on implementation of the SPF model. The SPF-SIG (2007-2012) and the SPF-PFS II (2012-2016) were the predecessors of SPF-PFS 2015 based

on competitive federal awards to the Kansas Department on Aging and Disability Services from SAMHSA. Additionally, the Kansas Prevention Collaborative-Community Initiative (KPCCI) began in 2015 as part of a new model for substance abuse prevention in Kansas, which supported the direct allocation of prevention funding to local coalitions (KPCCI Planning Grant RFA, 2016). The KPCCI was funded through designated block grant funds from the SAMHSA to KDADS.

Prevention Support System (Technical Assistance)

The Kansas Department for Aging and Disability Services (KDADS) was reorganized and integrated efforts to reduce substance use, underage drinking, suicide prevention, tobacco, and marijuana under Behavioral Health through the Kansas Prevention Collaborative (KPC). The KPC supported a new model of statewide technical assistance provision and direct local funding for communities in Kansas. The advantages of this model were: (a) data and interventions were determined at the local level; (b) grounded in a theoretical framework (SPF); and (c) training and technical supports were uniformly provided to all communities. In this model, five technical assistance providers (referred to as the KPC Project Team) were contracted to collectively contribute to capacity-building services for Kansas communities. Coalition training and technical assistance is provided by DCCCA Inc., advocacy and education services are provided by Keys for Networking and the National Alliance on Mental Illness (NAMI). Wichita State University's Community Engagement Institute (WSU- CMI) is the communication partner, Southeast Kansas Education Center (Learning Tree Institute/Greenbush) and the KU

Center for Community Health & Development provide data collection, analysis, and evaluation supports.

Participating Coalitions and Communities

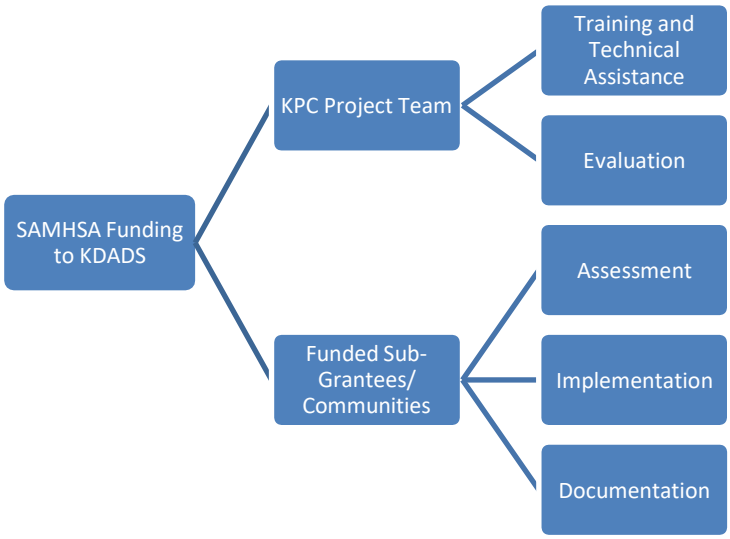

Figure 2: SAMHSA Funding to States

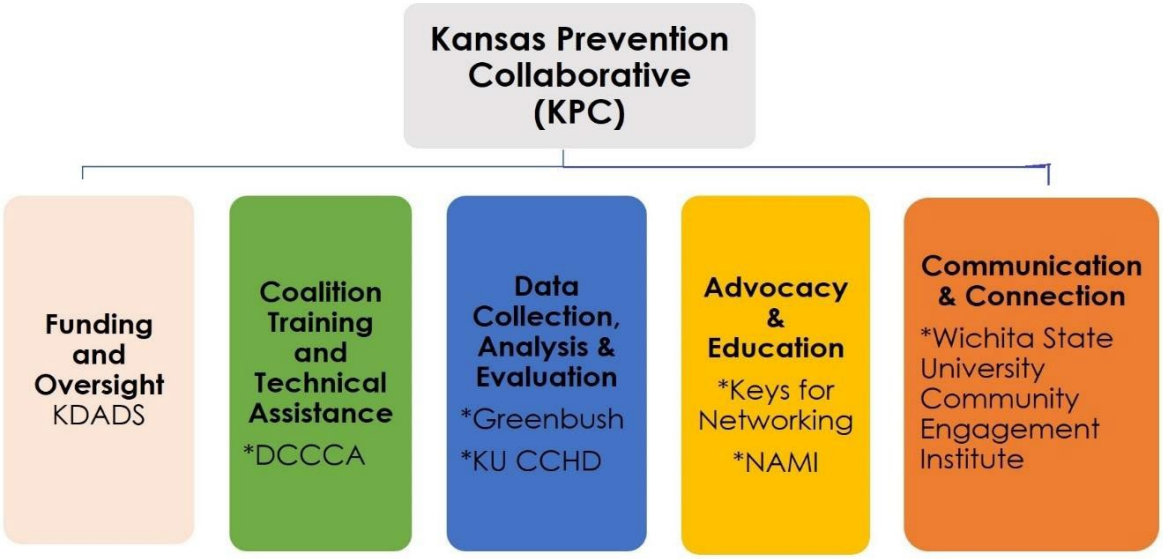

Figure 3: Kansas Prevention Collaborative (KPC) Model

For the present study, seven participant communities and coalitions for SPF-PFS (2015) were selected. The criteria for selection were as follows: (a) There was demonstrated high levels of underage drinking, (b) There was an established organization (i.e., local coalition) in place that could be mobilized to reduce underage drinking (UAD), (c) KCTC data was available for most of the years between 2004 to 2020 and participation rates were above 50% in the annual surveys in at least two of the baseline and intervention years. Grants were provided by KDADS to fund activities that would help prevent underage alcohol consumption, improve infrastructure and capacity of the community to implement interventions, gain funding from external sources, and implement evidence-based strategies (Rural Community Toolbox, 2020). There were seven funded communities, which are summarized in the table.

Table 2: Participating Coalitions

Intervention Community	**Population (0-18 years)**	**Community Coalition Name**
Atchison	3,259	Live Well Atchison
Barton	6,532	Central Kansas Partnership
Meade	1,144	Coordinated Approach to Community Health Coalition (CATCH)
Ness	644	Ness County Coalition
Sumner	5,550	Sumner County Drug Action Team
Woodson	672	Woodson County Interagency Coalition
Seward	7006	Liberal Area Coalition

Source: https://www.census.gov/quickfacts/fact/table/woodsoncountykansas,sumnercountykansas/PST045219

Intervention Communities

The table below summarizes intervention history for each community. Baseline for Sumner & Woodson was from 2004-2007, which is four years prior to when the SPF-SIG communities began implementation in their communities in 2007. All other communities have implemented interventions since 2015 and hence their baseline for this study is from 2012-2015.

Four of the communities also participated in other SPF interventions supported by KDADS (i.e., SPF-SIG, SPF-PFS, KPCCI) including Barton, Meade, Sumner, and Woodson Counties.

Table 3:History of Past Interventions

COUNTY	SPF-SIG (2007-2012)	SPF-PFS II (2012-2016)	KPCCI (2015-2017)	PFS UAD (2015-2020)
Atchison				X
Barton			X	X
Meade			X	X
Ness				X
Sumner	X	X	X	X
Woodson	X			X
Seward				X

Comparison communities. Comparison communities have been included in this study to minimize the effect of confounding variables. Similar comparison counties were selected based on county type (urban/rural), demographic distribution (whites and Hispanic population) and economic status (free lunch percentage). KCTC participation rate of 50% in at least two of the baseline and intervention years of their intervention counterpart was considered as minimum eligibility.

Implementation of SPF

The Institute of Medicine Framework for Public Health Action in communities was used to describe the activities associated with the implementation of each of the SPF phases. Table 5 below lists the SPF phase, the collaborative process, and a brief description of the process or activity based on implementation in the present study.

Table 4: Coalition Collaborative Processes and SPF Phases (Fawcett, 2010)

SPF Phase Supported	Collaborative Processes	Brief Description	KS SPF-PFS Milestones Activities
Assess	Analyzing information about the Problem/ Goals	This step involves analyzing information about underage drinking and involves assessing scope of underage drinking problems in the community based on local data gathered through KCTC surveys.	• Conduct needs assessment • Identify target areas and populations • Develop a problem statement • Map assets and resources and identify gaps • Access technical assistance to complete assessment
Capacity	Defining Organizational Structure and Operating Mechanisms	The process of defining a clear organizational structure and operating mechanism is necessary to assure that the work is carried out. Each funded community had an established prevention coalition and provided funds for staff support through this grant.	• Creation and continuation of partnerships • Partnership agreements and memorandums
Capacity	Developing leadership	This process is vital because it helps enhance the capacity of an effort to bring the community together for change and improvement. Leadership is important to carry forward the mission of the initiative and sustain the intervention's effect.	• Introduction of training and education to promote leadership and evaluation capacity
Capacity	Arranging for Community Mobilization	This step involves specifying roles for people to support change efforts through coalition staff and/or partnerships.	• Directory of key stakeholders, leaders and service providers • Meetings and workshops

SPF Phase Supported	Collaborative Processes	Brief Description	KS SPF-PFS Milestones Activities
			with key stakeholders • Development of capacity building plan
Plan	Establishing Vision and Mission	The process of establishing a vision and mission helps to communicate a shared purpose. Each coalition implementing SPF is required to develop a vision and mission and engage in action planning.	• Planning meetings and strategy development sessions
Plan	Developing a Framework or Logic Model	The Logic Model helps clarify the approach used by the collaborative. It visually displays the risk factors targeted and the strategies to use.	• Development of goals and objectives • Develop Logic Models
Plan	Developing and using Strategic Action Plans	Action plans help focus on how the community can attain objectives. This process includes identifying SMART Objectives that are Specific, Measurable, Achievable, Relevant and Time bound.	• Selection of evidence-based programs, policies and practices • Develop a comprehensive strategic plan to address underage drinking
Implement	Implementing effective interventions	Implementing effective interventions ensures that the partnership's efforts can influence outcomes. This process involves assessing community's risks based on data from the Kansas Communities That Care (KCTC) and targeting those risk factors through intervention.	Implementation of interventions
Implement	Assuring Technical Assistance	Technical Assistance (TA) enhances coalition capacity to implement and sustain interventions. TA is provided in each phase starting from assessment of risks in the	• Support to grantee regarding fiscal management and compliance

SPF Phase Supported	Collaborative Processes	Brief Description	KS SPF-PFS Milestones Activities
		community, to identifying and implementing evidence-based strategies and documenting accomplishments (monitoring the intervention).	• Support with data and evaluation tools • Support and training on reporting and documenting activities • Support with communication through the KPC that includes training events, workshops etc.
Evaluate	Documenting progress and using Feedback	The process of documenting progress and using feedback allows for ongoing assessment of intermediate outcomes and population health outcomes to allow for adjustments.	• Document implementation of the intervention in the Community Check Box
Evaluate	Making outcomes matter	This phase involves using rewards to strengthen collaborative efforts. Additionally, ensuring that information is shared with key audiences to inform not only implementation but also policymaking is an important accomplishment in this phase.	• Participate in process evaluation of the planning and implementation process • Consult with evaluation team to develop community-level evaluation plan
Sustain	Sustaining the work	Effective and sustained efforts are necessary to change conditions. This happens through continued engagement of multiple agents, working across sectors and across ecologic levels. Resource generation is an	• Planning for sustainability

SPF Phase Supported	Collaborative Processes	Brief Description	KS SPF-PFS Milestones Activities
		integral part of this phase and includes leveraging human and financial resources such as grants and long-term fund-raising.	

Assessment

The first stage of the SPF process supports communities in conducting an ongoing assessment of local levels of underage drinking prevalence. In the SPF, coalitions used epidemiological data to understand the scope of the problem. Community assessments helped with the following: (a) Framing of the problem; (b) Examining the etiology of underage drinking; (c) Understanding the root cause of the problem and, (d) Identifying factors aiding in progress of the condition. The Tri-Ethnic Community Readiness Survey with key informants in the community, was conducted by coalitions as part of the assessment phase. In addition to community readiness, funded coalitions were also required to complete a survey of cultural competence. Assessment results were used in the planning phase to identify suitable target area and population.

Capacity

In the second phase, data from the Tri-Ethnic Community Readiness Survey were used to inform the Capacity Building Plan for the community. The stages of readiness indicated in the survey offer direction for the capacity of the community to progress to the next stage of readiness for supporting change in the community related to prevention outcomes. Technical assistance was provided by the KPC Project Team to local coalitions to make sense of the Tri-Ethnic data and devise strategies to improve readiness. Communities created and continued partnerships to develop local capacity to implement prevention interventions. Some communities might have

previous history of completing a needs assessment or strategic planning process in their communities even prior to implementing PFS UAD. In this phase, local meetings and workshops were held by the KPC Project Team with key stakeholders and service providers.

Defining Organizational Structure and Operating Mechanisms. Representatives of 12 community sectors were included in coalition membership as part of the funding requirements for this intervention. Additionally, coalitions were required to provide deliverables with a clear organizational structure and formalized leadership to KDADS at the time of submission of the grant proposal or by the first year of planning for the intervention. The local coalitions had to demonstrate a history of working together as a group and dedicated staff or volunteer support to participate in the KPC trainings and technical support sessions.

Planning

The planning phase included the development of logic models and action plans. As part of the planning process, objectives and evidence-based strategies were identified. The plan included both a strategic and action plan to guide the local prevention efforts. Prior to implementation of each SPF phase, the local coalitions received training and technical support for how to implement the phase and related activities.

Development of Logic Models. Communities that received a grant were required to develop a logic model that identified the target behaviors of change. The risk factors that needed to be modified to change these behaviors were also selected. Then, evidence-based strategies were identified by the local coalition to address these risk factors. Technical Assistance was provided to create a Logic Model for implementing PFS UAD.

Developing Strategic and Action Plans. Strategic and action plans were created for each strategy selected based on the logic model. The action plan included steps to be taken and a

timeline for when the steps would be completed. This ensured that the strategy was implemented as planned. Some communities had already gone through a strategic planning process and at least had a vision and mission. Additionally, they created action plans for implementing evidence-based strategies. For example, “It Matters” was a social marketing strategy chosen by a community as part of a media campaign to address the risk factor “low perception of harm.” The action plan detailed steps to be taken to ensure that the media campaign reached the entire county. In addition to strategy action plans, PFS coalitions also developed MOUs with school districts to support implementation of a Kansas Communities that Care (KCTC) Participation Plan which detailed strategies to complete the annual Kansas Communities That Care Survey.

Development of Objectives. Coalitions developed SMART objectives (Specific, Measurable, Achievable, Relevant and Timely) which served as an indicator of the progress made in the community. The objectives specifically stated the behavior, the relative metric compared to baseline and a duration by which the objective would be attained. The common metrics used across the study coalitions for underage drinking were past 30-day alcohol use and past 30-day binge drinking.

For e.g. “By 2017, the percentage of youth in 6th, 7th, 8th, 9th, 10th, and 12th grades reporting no risk of harm from alcohol use will be reduced by 2 percentage points from 19.64% in 2014 to17.64% in 2017.”

Development of Strategies. After developing objectives, coalitions identified evidence-based strategies to implement to reach their goals. Evidence-based strategies were required to meet the following criteria: (a) have empirical data related to UAD outcomes, (b) published in peer-reviewed journals or an approved source of validation, and (c) endorsed by national prevention agencies such as Centers for Disease Control and Prevention (CDC) and Substance

Abuse and Mental Health Services Administration (SAMHSA). A detailed Action Plan was developed to guide implementation of each of the selected strategies. In the action plans, the steps specifically listed corresponding Community Changes associated with implementation. Community Change activities included program, policy, and practice changes that would be necessary to move the indicator in the desired direction.

Implementation

The focus of the implementation phase was to implement evidence-based programs with fidelity. Adherence to the logic model and action plans were promoted for implementing programs in the community. In addition to planning, it was important to maintain ongoing assessment and monitoring of local levels of underage drinking and other problem behaviors.

Implementing effective interventions. Communities were provided with technical assistance to implement evidence-based strategies. Interventions were broadly categorized by KDADS as media (e.g., It Matters), environmental (e.g., Sticker Shock) and prevention education (e.g., Botvin's Life Skills) strategies. Communities were provided with a menu of evidence-based strategies recommended by SAMHSA and grouped by risk factor. Coalitions could select the most appropriate strategies to serve their community's needs, based on other contextual considerations. The categorizations of strategies were promoted by CSAP as part of the SPF framework.

Assuring Technical Assistance. Ongoing technical assistance (TA) was provided to coalitions to complete project milestones and deliverables. A member of the grant project team acted as a liaison for each community. Coalitions were able to communicate with a KDADS representative throughout the grant period to obtain administrative support related to the effort or to address concerns. KDADS also coordinated regular statewide meetings across the funded

prevention coalitions as part of the training process to share progress. Web-based training was made available to intervention communities. Technical assistance providers offered support to communities in each phase of the SPF. Additionally, monthly support calls were provided to communities by the KPC to address any issues, concerns and provide feedback on their process documentation. Online tools and webinars were accessible to coalitions through the KPC website.

Evaluation

The primary goal of the evaluation phase was to use the data collected in each phase to inform strategy implementation. For the SPF-PFS, Learning Tree Institute with Greenbush and the KU Center for Community Health Development comprised the evaluation team. Greenbush facilitated data collection at the community level through Kansas Communities That Care (KCTC) survey. The KU Center for Community Health & Development collected data related to process and implementation of the SPF. Although summative evaluation occurred at the conclusion of each funded initiative, ongoing evaluation activities included providing evaluation training and technical supports to local coalitions to work with their communities in assessment and collecting ongoing data on implementation of strategies.

Documenting progress and using feedback. The process for systematic documentation of information was an essential reporting requirement that supported evaluation and the completion of federal level reporting on outcomes and implementation in Kansas. Through the Community Check Box (CCB) there were online logs used to record the implementation of activities undertaken by the coalition in implementation of the SPF and related strategies. Process data were also collected using the Community Check Box Evaluation System to systematically document levels of implementation of the SPF model and related evidence-based

strategies. A quarterly sensemaking session was conducted with representatives of local coalitions in each phase to ensure documentation was complete and to examine the data with the communities. The sensemaking sessions were also helpful to communities to understand how data could be presented to secure additional funding from other sources. For example, local coalitions examined assessment data to guide the selection of evidence-based strategies. Then, data were reviewed with coalitions to understand if strategies were being implemented as planned based on the logic models and action plans.

Making outcomes matter. This process refers to rewarding accomplishments in the community, including ensuring that there is an audience that is aware and cares about the outcomes to be achieved. In Kansas, annual prevention conferences recognize the contributions made by coalitions to their communities by sharing their success with other coalitions. Additionally, annual presentations of community progress give communities an opportunity to learn from each other and celebrate their successes. Kansas Prevention awards in seven categories are presented annually to outstanding individuals, communities and organizations for their partnership and contributions to preventing underage drinking in the state of Kansas. Locally, the coalitions regularly reviewed and discussed progress in strategy implementation and to achieve desired outcomes to also ensure there were champions in the coalition and community.

Sustainability and Cultural Competence

Coalitions were provided training around cultural competence and sustainability as part of the initial training and technical support offered by the KPC. Then, they formulated both cultural competence and sustainability plans based on their initial assessment. Technical

assistance was provided to adapt interventions to local context so coalitions could support culturally competent programming.

Measurement

The study includes dependent and independent variables. The variables are categorized by research question and summarized in the table below.

Table 5: Research Questions

Research Question	**Independent Variable**	**Dependent Measures**	**Measurement Instrument/ Source of Data**
What is the effect of the Strategic Prevention Framework (SPF) on underage drinking and related outcomes?	• Community Changes, Services Provided • Sustainability of community and system changes	• Lifetime alcohol use • 30-day alcohol use • 2-week binge drinking	• Kansas Communities that Care (KCTC) Data • Community Check Box (CCB Data) • Community Change Sustainability Survey & Interview and Sustainability Strategies Survey
Did SPF implementation increase capacity of coalitions/communities to implement interventions to prevent/reduce underage drinking?	• Level of Coalition Processes and Activities implemented including Community Changes, Community Action and Development Activities	• Community readiness score	• Community Check Box (CCB Data) • Tri-ethnic community readiness survey

Question One: Examining the Effect of SPF Implementation

For this research question, the dependent measures are underage drinking outcomes. The independent variables measure the dose of the intervention (e.g., number of Community Changes and types of Services Provided), and its corresponding effect on the dependent variables.

Dependent measures. The dependent measures for the first question include underage drinking outcomes. Specifically, the following data has been collected: (a) 2004 to 2020 self-reported lifetime alcohol use, past 30-day alcohol use and past two-week binge drinking.

Underage drinking measures. Outcome data for this dissertation study has been obtained from the Kansas Communities That Care (KCTC) survey that is administered annually to students in 6th, 8th, 10th, and 12th grades. The indicators examined for this study include "Lifetime alcohol use," "Past 30-day alcohol use" and "Past two-week binge drinking." The frequency of "At least Once" as a response to each of the survey questions has been used as a measure of lifetime alcohol use and binge drinking.

Table 6: KCTC Outcomes

LIFETIME ALCOHOL USE	In your lifetime how any occasions (if any) have you had alcohol? (more than just a few sips?	(a) At least Once (b) 1 to 2 occasions (c) 3 to 5 occasions (d) 6 to 9 occasions (e) 10 to 19 occasions (f) 20 to 39 occasions (g) 40 or more (h) 0 occasions
30-DAY ALCOHOL USE	On how many occasions, if any have you had beer, wine or hard liquor during the past 30 days?	(a) At least Once (b) 1 to 2 occasions (c) 3 to 5 occasions (d) 6 to 9 occasions (e) 10 to 19 occasions (f) 20 to 39 occasions (g) 40 or more (h) 0 occasions
BINGE DRINKING	Over the last TWO WEEKS, how many times have you had five or more alcoholic drinks in a row?	(a) At least once (b) Once (c) Twice (d) Three to Five times (e) Six to Nine Times (f) 10 or more (g) None

Reliability and validity of measures. The KCTC survey has validity checks built into the instrument to identify participants who have not answered accurately or consistently. Each year about 4 to 5% of surveys are not included in the analyses as they are invalid. The KCTC survey uses a Census approach to evaluate outcomes. Previous studies have demonstrated the construct validity of the questions assessing risk and protective factors through factor analyses (Glaser, Horn et al., 2005).

Independent Measures. Several measures have been used to examine the implementation of the SPF framework in the PFS communities. For this question, the independent variable studied was the number of Community Changes.

Funded coalition members were required to maintain a record of their intervention activities (referred to as "accomplishments") in the Community Check Box Evaluation System developed by the KU Center for Community Health & Development (CCHD). The accomplishments were regularly reviewed by CCHD staff (including the author) and categorized into codes for evaluation. For this research question, frequency, and type of "Community Changes" over time were studied.

Community Changes. Community Changes refers to new or modified programs, policies or practices in the community or system facilitated by the initiative and related to its goals and objectives. Accomplishments should meet all the following criteria to be classified as Community Changes: (a) must have occurred; (b) are related to the initiative's chosen goals and objectives; (c) are new or modified program, policies, or practices in various parts of the community and (d) are facilitated by individuals who are members of the initiative or are acting on behalf of the initiative. Please see Appendix A for detailed description of activity codes. An example of a Community Change is: "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."

Interobserver Reliability. The accomplishments were regularly reviewed by CCHD staff (including the author) and categorized and coded. A primary observer scored 100% of documented entries while a secondary observer coded at least 33.3% of the entries. Inter-rater reliability between observers was calculated as the sum of agreements divided by the total number of accomplishments including agreements and disagreements. This value was multiplied by 100 to get a percentage.

Community Change Sustainability Survey & Interview. One to two members from each of the seven coalitions were invited to complete the sustainability of Community Change survey and interview between July and August 2021. The sustainability survey reviewed program, policy and practice changes sustained in the community over time. Community representatives were instructed to indicate whether each Community Change documented was still sustained in their community. They could respond with "Yes," "No" or "Don't Know" to each community change. The survey included Community Changes documented during the 2015-2020 grant. The interview process lasted about 1 hour and was semi-structured. Interviewees reviewed graphs of their accomplishments from the Community Checkbox and discussed the conditions under which the strategies were still sustained/not sustained in their community. Participants were specifically prompted to reflect on factors that facilitate or challenge sustaining the strategies. Please see Appendix B for an outline of the survey and Appendix C for interview questions.

Sustainability Strategy Survey. Participants in the Community Change Survey & Interview were also asked to complete the Sustainability Strategy Survey. The Sustainability Strategy Survey assessed the 13 core strategies for sustainability at the coalition level to understand what supported the maintenance of prevention effort in the community and over time (KU Center for Community Health & Development, 2020). Please see Appendix D for sample sustainability strategy survey.

Table 7: Participation in Community Change Sustainability Survey & Interview and Sustainability Strategy Survey

Participating Coalitions	Number of Participants (n)		
	Community Change Sustainability Survey	Community Change Sustainability Interview	Sustainability Strategy Survey
Live Well Atchison	1	1	1
Central Kansas Partnership	1	2	1
Coordinated Approach to Community Health (CATCH)	1	2	1
Liberal Area Coalition for Families	2	2	2
Woodson County Interagency Coalition	1	1	1

Data Analysis

Dependent Variables. The dissertation study examined the dependent variables using visual and statistical analytic methods. Visual analysis of variables includes frequency and trend of the data plotted on graphs. Statistical methods included descriptive statistics such as mean, mode, median and standard deviation. KCTC outcome data are presented based on the percentage point change over time. For visual inspection, at least four data points in each condition has been provided for visual analysis of each outcome.

Analysis of the data includes examining trends and testing for statistical significance of the differences within each group, for both the intervention and comparison groups. A paired samples t-test and independent samples t-test were used to compare differential outcomes in treatment and comparison groups. The paired samples t-test was used to compare means from baseline and treatment phases for both intervention and comparison communities. The test indicated whether the differences within group were significant. The independent samples t-test was used to compare the change in alcohol outcomes between baseline and treatment phases for intervention and comparison communities for statistical significance. Additionally, to provide a visual representation of the relationship between dependent and independent variable, a graph was plotted with two datasets including progression of alcohol use and implementation of Community Changes.

Independent Variables. Community Changes were represented by the frequency and percentage of documented activities implemented related to a strategy. The data were analyzed by types of evidence-based strategy and CSAP strategies implemented. A visual analysis of the relationship between the variables have been plotted on a graph to understand how frequency of Community Changes vary over time in relation to alcohol use outcomes.

Community Change Sustainability Survey & Interview. For the survey, responses were analyzed as the number of community changes that sustained over the total number of community changes implemented by the coalition during the implementation period between 2015-2020. This value was multiplied by 100 to get a percentage of sustained community changes for each community.

For the interviews, transcripts were inductively analyzed to create an initial codebook of themes. This codebook was applied to remaining transcripts and more themes and sub-themes were coded. Finally, overarching themes and subcodes were generated by combining codes.

Sustainability Strategy Survey. The online Sustainability Strategy Survey was administered betweeen July and August 2021 to the same participants of the Community Changes Sustainability Survey & Interview. Participants were provided a list of 13 strategies and asked to rank each strategy on a scale of 1 to 5, where "1" is Never Used and "5" is Highly Used. An example strategy is “Sharing Positions and Resources.” This refers to sharing staff positions, space, equipment or other resources with organizations with similar goals. Responses were summed to achieve a total score for each strategy across all participants. Scores were averaged for surveys from the same community. Strategies were then ranked from highest total score to lowest, indicating coalitions’ preference for sustainability strategies, with the highest total indicating the highest preferred strategy across coalitions. Appendix D is a sample of the sustainability strategy survey used with participants.

Question Two: Factors that Contributed to SPF Implementation

For question two, the effect of the intervention on improving community readiness has been examined. The dependent variable for this research question is the Tri-Ethnic Community Readiness Assessment score and the independent variables are the implementation of SPF phase activities (measured by accomplishments documented in the Community Check Box).

Dependent Variable. The dependent variable for this question is the community readiness score overall and across domain areas.

Tri-Ethnic Community Readiness Assessment. Community readiness refers to the preparedness of the community to address a community problem such as underage drinking.

Research shows that each community is different in their perceptions of the need to address some issues locally, as well as in the capacity to facilitate change (Oetting et al., 1995). The Tri-Ethnic Community Readiness Assessment is a research-based theory that helps understand the readiness stage of a community with respect to implementing underage drinking interventions. Six dimensions of readiness are described by the model which include: (a) Community efforts; (b) Community knowledge of efforts; (c) Leadership; (d) Community climate; (e) Community knowledge about the issue; (f) Resources related to the issue

The community's readiness is assessed through a survey and interview process. In the PFS-UAD project, the Tri-ethnic Community Readiness assessment was administered once by coalition representatives to community members at the beginning and end of the intervention. The changes in pre and post-test scores have been compared with the coalition processes implemented by the communities to understand if capacity-building activities were facilitated in sufficient measure to increase readiness for change.

Independent Variables. The independent variables studied for this question includes accomplishments documented in the Community Check Box Evaluation System pertaining to specific codes.

Coalition Activities. The codes used to characterize accomplishments that are capacity-building are "Community Action," "Development Activity" and "Community Changes." The examination of documented community activities pertaining to these codes, will permit a deeper analysis to provide context for the implementation of the SPF and its association with changes in readiness of the coalition. 'Community Action' refers to specific effort to bring about a new or modified program, policy or practice in the community or system. Letters to the editor and town hall meetings are examples of community action. 'Development Activity' refers to actions taken

to prepare or enable the group to address its goals and objectives. Working on developing a plan for assessment or sustainability is an example of a Development Activity. 'Community Change' refers to new program, policy or practice changes implemented by the coalition as part of its efforts to prevent underage drinking in the community through this grant.

Multisector Engagement. Additionally, the accomplishments were also categorized and coded for engagement with community sectors. The variety of community sectors engaged and the distribution of activities within these sectors will indicate the capacity of the coalition to implement prevention interventions in the community. The 12 key community sectors based on the federal Drug-free Communities Support Program are youth, parents, business, media, school, youth-serving organizations, law enforcement agencies, religious or fraternal organizations, healthcare professionals, state, local or tribal entities, civic or volunteer groups and other organizations involved in reducing substance use.

Data Analysis

Dependent Variable. The Tri-ethnic Community Readiness assessment was conducted by intervention communities twice during the grant period. The first assessment was conducted prior to the start of the intervention in 2016 in and was followed up by a post-intervention assessment in 2020. Coalitions conducted between 6-10 interviews in their community with representatives from different sectors (Community Check Box, 2021). The responses were scored by two independent scorers who tabulated their individual scores for each dimension from each interview. After discussion, the scorers provided a combined score for each dimension and interview. A community's overall score for each dimension was calculated as an average of the combined scores. A community's overall readiness score was calculated as an average of the combined interview score. Appendix E describes the readiness stages and provides an

illustration of the scoring process. The numerical difference in community readiness scores between baseline and intervention phases is proportional to the improvement in community readiness stages. In addition to overall community readiness score, scores have also been presented for the six dimensions of community readiness.

Independent Variable. The coalition's activities in each SPF phase are presented as a frequency. The differential implementation of 'Capacity' phase activities across coalitions are compared to their community readiness scores to understand if there is an association between frequency of activities and change in community readiness. Additionally, the different types of community sectors involved as agents and targets of change in the implementation of the intervention show evidence of increased coalition capacity.

Results

Research Question One: Effect of the Strategic Prevention Framework on Underage Drinking and Related Outcomes

Types of Coalition Activities

Community Changes were measured based on accomplishments entered in the Community Check Box Evaluation System. All entries (100%) were scored by a primary observer and at least 33.3% of the entries were scored by a secondary observer. An inter-rater reliability of 94.3% was observed between primary and secondary observers for these fields.

Implementation of Evidence-Based Strategies. Table 9, describes the implementation of evidence-based strategies by the intervention communities. During the Assessment phase of the SPF intervention, coalitions identified evidence-based interventions to implement in their communities. The Evaluation team provided technical assistance in the selection of appropriate strategies based on an assessment of risk factor data based on the Kansas Communities That Care (KCTC) survey.

There was a total of 15 evidence-based strategies implemented across the seven communities. The mean number of strategies implemented were 2.14, with a range from 1 to 6. The categories of evidence-based strategies available for communities to choose from included environmental, prevention education and media awareness. For the evidence-based strategies implemented, 18.75 % were environmental, 46.6% prevention education. **A**ll intervention communities implemented “It Matters” as an information dissemination strategy in their communities.

Table 8: Implementation of Evidence-based Strategies

Coalition	Environmental	Information Dissemination	Prevention Education	Community-based Processes
Live Well Atchison	-	• It Matters	-	-
Central Kansas Partnership	• Community Trials	• IT Matters	-	-
Coordinated Approach to Community Health (CATCH)	-	• It Matters • Parents Who Host, Lose the Most • Talk They Hear you	-	-
Ness County Coalition	• Community/Public events	• It Matters	-	-
Sumner County Drug Action team	• Community/Public Events • MIP/MIC • Sticker Shock	• It Matters • Talk They Hear You	• Crusader Way • Life of an Athlete • Life Skills • Lion's Quest • MADD Power of Parents • Strengthening Families	• Communities Mobilizing for Change on Alcohol (CMCA)
Woodson County Interagency Coalition	• Community/Public Events	• It Matters	• Life of an Athlete • Too good for Drugs	• Communities Mobilizing for Change on Alcohol (CMCA)
Liberal Area Coalition	• Community/Public Events	• It Matters • Talk they Hear You	-	-

Coalition Community Changes. The intervention communities collectively documented 531 program, practice, and policy changes cumulatively during the study period in supporting the implementation of evidence-based strategies. Of the total number of Community Changes documented in the Community Check Box, the percentage of individual communities is presented in Table 9 below. The percentage of the total number of Community Changes documented in the Community Check Box for PFS communities ranged from 0.94% for Atchison to 51.04% for Sumner. Sumner and Woodson contributed to 81.17% of the documented Community Changes. Table 9 below lists the percentage of Community Changes by coalition based on the total changes for the PFS initiative.

Table 9: Percentage of Community Changes Implemented

Coalition Name	**Percent**
Live Well Atchison	0.94%; (n=5)
Central Kansas Partnership	6.03%; (n=32)
Coordinated Approach to Community Health	6.97%; (n=37)
Ness County Coalition	2.82%; (n=15)
Sumner County Drug Action Team	51.04%; (n=271)
Woodson County Interagency Collaboration	30.13%; (n=160)
Liberal Area Coalition	2.07%; (n=11)
Total	100%; (n=531)

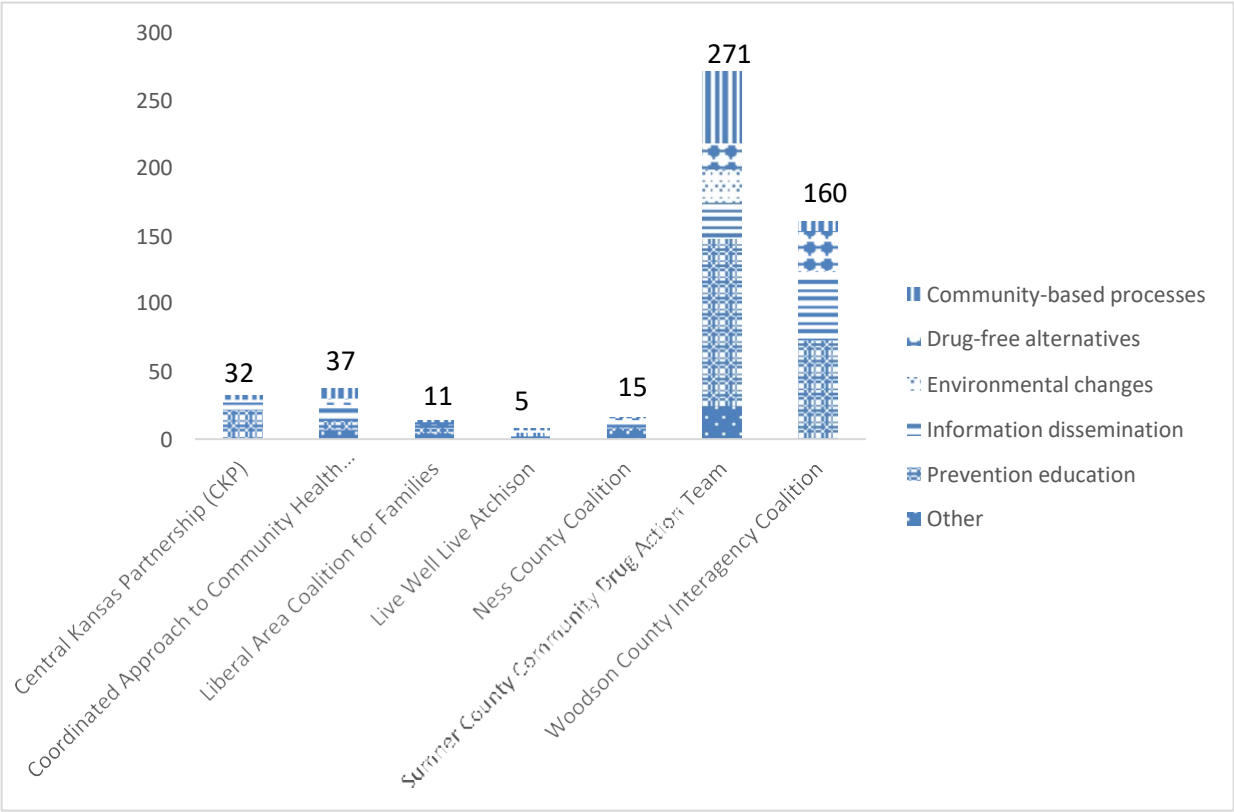

Figure 4: Community Changes by CSAP Strategy

Figure 4 above shows the distribution of community changes by CSAP strategy for each coalition. Sumner and Woodson implemented evidence-based interventions belonging to five categories of CSAP strategies including information dissemination, environmental changes, prevention education, drug-free alternatives and community-based processes. "Other" Community Changes refers to program, policy and practice changes such as adapting usual protocols for COVID-19 such as virtual meetings. Other communities documented at least two categories of activities pertaining to CSAP strategies.

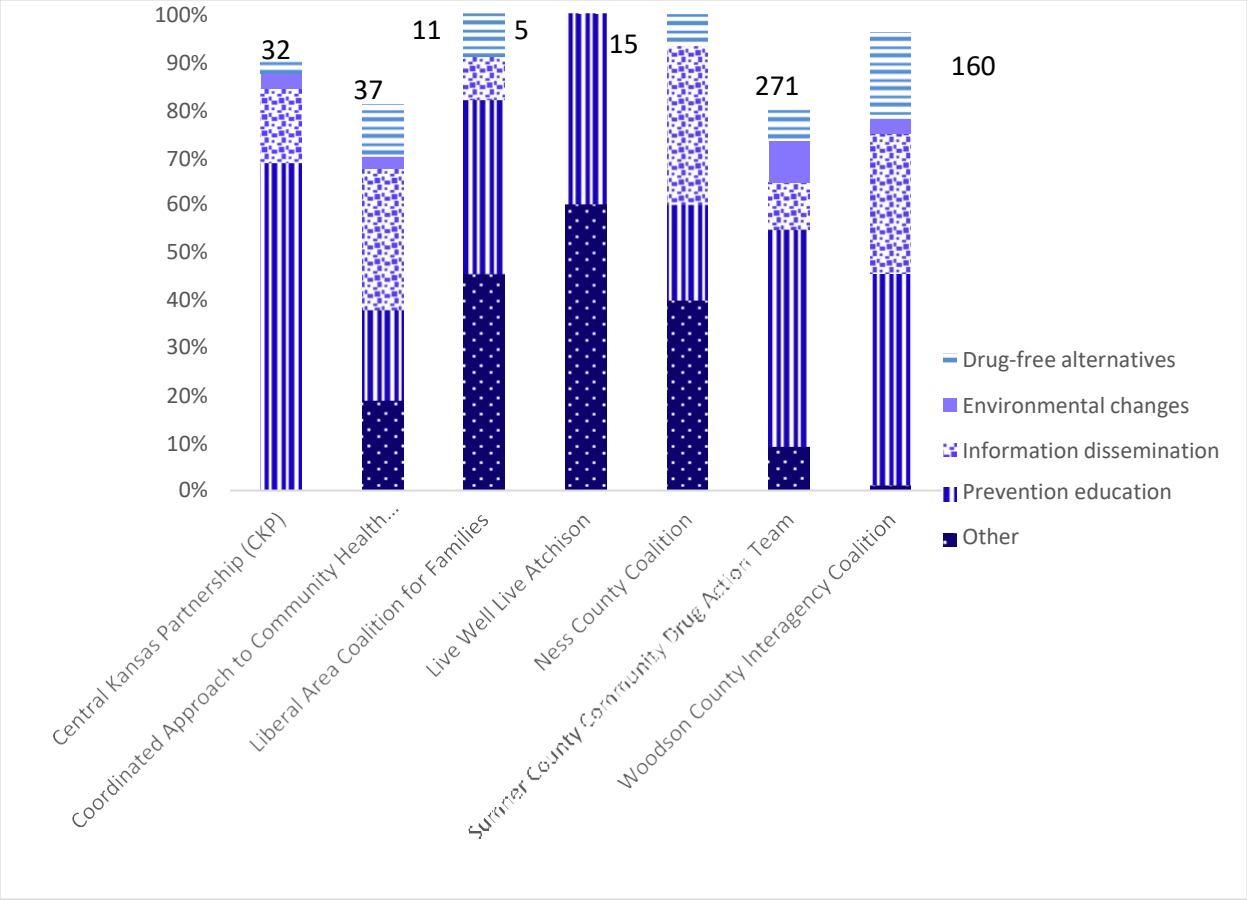

Figure 5: Proportion of CSAP Strategies Implemented

Figure 5 displays the proportion of strategies implemented by each community. Visual analysis shows that intervention communities implemented between two to five strategies in their communities. Information Dissemination and Prevention Education were widely used. Problem Identification and Referral was not used as an intervention strategy by any community.

Community Change Sustainability Survey Findings. For the Community Change sustainability survey, seven completed responses were received from participants representing five coalitions. Sumner and Ness were not represented in the survey.

Table 10: Sustained Community Changes in Intervention Communities

Community	**Percentage of sustained changes**	**Illustrative Example of Strategies Sustained**
Atchison	25% (n=1)	• It Matters
Barton	81.25% (n=26)	• All Stars
Meade	27.27% (n=9)	• It Matters • Town Hall • Sticker Shock
Woodson	40% (n=10)	• It Matters • Don't be Afraid to Say No
Seward	100% (n=11)	• Board game nights • It Matters • AlcoholEdu

Table 10 displays the percentage of community changes that were sustained in the community in 2021, which was one year after the completion of PFS UAD 2015-2020 grant.

Community Change Sustainability Interview. Representatives from five coalitions participated in the Community Change Sustainability Interviews. The main themes that emerged from the qualitative interview included facilitators and inhibitors of sustaining Community Changes and SPF contribution to capacity development of the coalition.

With respect to sustainability, institutionalizing prevention education curriculum in the school was one of the methods of sustaining community change. In Seward, the local school district absorbed the cost of purchasing workbooks for students while the coalition's responsibility was to train the teachers in imparting the curriculum and making sure that the intervention was implemented with fidelity. In Seward and Woodson, It Matters campaign materials were purchased in excess in 2020, owing to not being able to implement as many in-person activities as usual, due to COVID-19. So, coalitions planned to use these materials for dissemination till they ran out of stock and then planned to procure free materials through National Institute of Drug Abuse (NIDA)'s publication website. With respect to sustaining other

drug-free alternative events conducted in the communities, representatives from Woodson & Meade said that local businesses were contributing. Seward representatives acknowledged that keeping participation rates high in KCTC was sometimes a challenge but that it was important regardless of whether they received funding for underage drinking prevention or not.

With respect to capacity development, coalition representatives from Seward acknowledged that SPF implementation had resulted in increased community partnerships owing to the focus on collaborating with other sectors. Other coalitions noted the improvement in community knowledge of efforts through the media campaigns. Among facilitators of sustainability, coalitions noted the partnerships with the business sector and the buy-in from the school district regarding prevention education curriculum. COVID-19 emerged as a barrier to sustainability in many ways. In-person activities could not be resumed in schools due to COVID restrictions. Some Community Changes could not be implemented although they were planned. However, Seward noted that virtual coalition meetings due to COVID-19 had resulted in increased attendance.

Sustainability Strategy Survey Findings. Six participants representing five intervention communities completed the sustainability strategy survey. The rank-order of sustainability strategies adopted by communities are summarized in Table 12 below. The maximum score that could be acquired for each strategy, based on rank order was 25. Among these strategies, providing online giving opportunities, establishing a donor or membership base, securing endowments, and planned giving arrangements, acquiring public funding, developing a fee-for-structure service and pursuing third party funding were marked as “Never Used” by participants. All other strategies were indicated to be at least rarely used.

Out of seven strategies listed as "Never Used," 40% of respondents did not use at least four strategies, 20% did not use at least three strategies and another 20% did not use two of the strategies. Only one community reported that they had used all strategies in some measure.

Table 11: Rank-Order of Sustainability Strategies Adopted by Communities

Survey Rank	Sum of Scores from Survey	Sustainability Strategy
1	22.5	• Share position and resources
2	22	• Become a line item in an existing budget • Incorporate activities or services in organizations with a similar mission
3	21.5	• Apply for grants • Tap into personnel resources
4	21	• Solicit in-kind support
5	17.5	• Develop and implement fundraisers
6	13.5	• Pursue third-party funding
7	13.5	• Develop fee-for-service structure
8	12	• Acquire public funding
9	11	• Secure endowments and planned giving arrangements
10	9.5	• Establish a donor or membership base
11	8.5	• Provide online giving opportunities

KCTC Outcome Data

Of the seven communities that implemented underage drinking prevention in their community using the SPF, only six communities met the KCTC participation rate criteria of 50%

participation in at least two each of the baseline and intervention years. Hence, KCTC outcome data is only presented for the six communities and excludes Seward County. The baseline period included the mean from 2012 to 2015 and the intervention period was from 2016 to 2019 for Atchison, Barton, Meade, Ness. Sumner and Woodson started implementation earlier through the SPF-SIG grant and their baseline years were 2004-2007 and intervention years were 2008-2011. Although comparison communities did not have an intervention in their community, the mean prevalence has been calculated for years 2012-2015 and also for 2016-2019 to correspond with treatment communities. Appendix F includes data for baseline and treatment mean and percent change for intervention communities.

Past 30- Day Alcohol Use. Results indicate a decrease in the past 30-day alcohol use for treatment communities based on self-reported data using the Kansas Communities that Care (KCTC) Survey. The mean prevalence of past alcohol consumption among youth ages 12-17 in Kansas was 30.23% (SD = 9.67) at baseline. The mean prevalence in the intervention condition was 25.17% (SD = 4.61). Compared to baseline mean prevalence there was a decrease of 5.06% in the treatment mean prevalence. Woodson reported the highest mean change of 12.8% from baseline to intervention followed by Sumner (8.98%), Barton (6.45%), Ness (5.49%), and Atchison (2.86%). Meade showed a mean increase of 6.23% from baseline.

Results indicate a decrease in the past 30-day alcohol use for comparison communities. In 2012, the mean prevalence of past alcohol consumption among youth ages 12-17 was 27.60% (SD= 5.65) for comparison communities. The mean prevalence in 2019 was 24.22% (SD= 6.16). Compared to the mean prevalence between 2012 and 2019, there was a 3.32% decrease observed.

A paired samples t-test was conducted to examine the differences in 30-day prevalence in baseline to intervention in both intervention and comparison communities. Among the intervention communities, results indicate that there was not a statistically significant difference in mean prevalence between baseline and treatment conditions; t (5) = 1.91; p=0.11. Further analysis with respect to effect sizes showed that although the change in prevalence was not statistically significant, the effect size was large (Cohen' d = 0.78). Among the comparison communities, results indicate that there was not a statistically significant difference in mean prevalence from 2012 to 2019; t(5) = 2.36; p= 0.06.

An independent samples t-test was conducted to examine the statistical significance of differences between the intervention and comparison groups. Results indicate that there was not a statistically significant difference between intervention and comparison groups; t (7.698) = -0.557 ; p= 0.593.

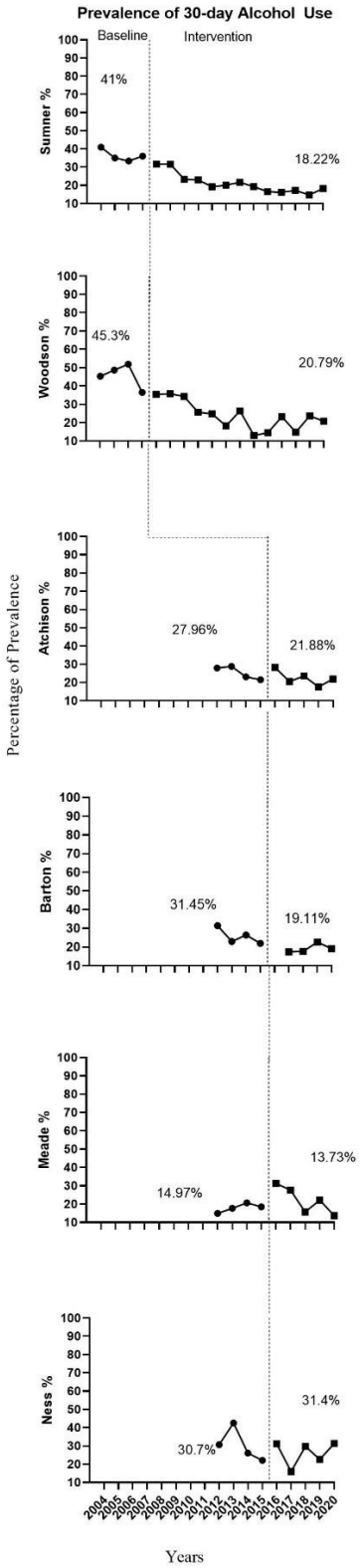

Figure 6: 30-Day Alcohol Use Prevalence

Lifetime Alcohol. Results indicate a decrease in mean lifetime alcohol use for intervention communities. The mean percentage of lifetime alcohol consumption at baseline was 51.61% (SD = 12) and decreased to 46.87% (SD = 7.6) after intervention. The mean percentage of lifetime alcohol use reduced by 4.73% from baseline to intervention for the intervention communities. Woodson showed the highest decrease of 14.1% followed by Sumner (7.01%), Barton (7.84%), Atchison (3.73%) & Ness (2.53%). Meade showed an increase of 6.77% from baseline to intervention. Among comparison communities, results indicate a decrease in mean lifetime alcohol consumption from 47.88% to 43.80% from 2012 to 2019 for the comparison communities.

A paired samples t-test was conducted to examine the differences in lifetime alcohol consumption from baseline to intervention in both intervention and comparison communities. For the treatment communities, results indicate that there was not a statistically significant difference in prevalence; $t\ (5) = 1.67$; $p=0.15$. Further analysis with respect to effect sizes showed that although the change in prevalence was not statistically significant, the effect size was medium; d = 0.68. Among comparison communities, results indicate that the changes were statistically significant; $t\ (5) = 3.96$; $p=0.01$.

An independent sample t-test was conducted to examine the differences between the intervention and comparison groups. Results indicate that there was not a statistically significant difference between intervention and comparison groups; $t\ (6.301) = -0.218$; $p=0.83$.

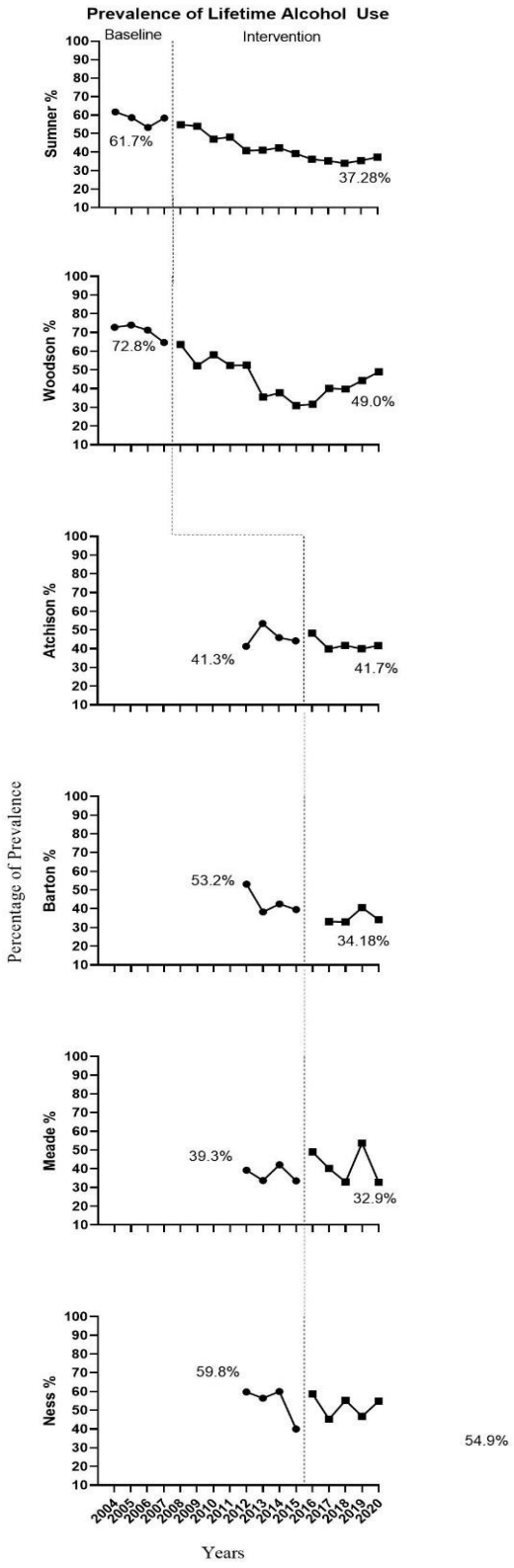

Figure 7: Prevalence of Lifetime Alcohol Use (Intervention Communities)

Binge Drinking. Results indicate that 2-week binge prevalence decreased from baseline (M= 17.45; SD= 6.92) to intervention (M= 14.78; SD = 4.46) for treatment communities. For Woodson, the mean prevalence of 2-week binge drinking decreased from 29.10% to 23.13%. The majority of intervention communities had a decrease from the initial year of the pre-intervention phase to the last year of the post-intervention period. However, Meade had an increase in mean prevalence from 9.05% to 14.07%. Comparison communities reported a decrease in mean prevalence of 2-week binge drinking from 2012 (M= 14.67; SD= 3.04) to 2019 (M = 12.53; SD= 3.55).

A paired samples t-test was conducted to compare 2-week binge drinking in baseline and intervention conditions. For intervention communities, there was not a significant difference in the scores for baseline and treatment conditions; t (5) = 1.46, p= 0.20. For comparison communities, there was not a significant difference in scores from 2012 to 2019; t (5) =2.871; p= 0.04.

An independent samples t-test was conducted to compare changes in prevalence of 2-week binge drinking in treatment and comparison groups. There was not a significant difference in scores for treatment and comparison conditions; t (6.63) = -0.27, p=0.80.

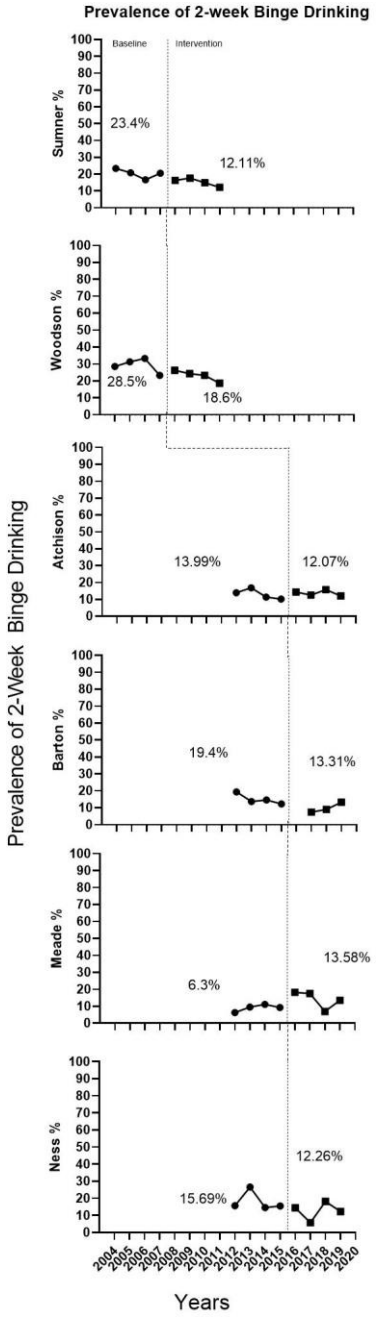

Figure 8: Prevalence of 2-week Binge Drinking (Intervention Communities)

Relationship of the Dependent and Independent Variable. Figure 9 displays the interaction of Past 30-Day Alcohol use (dependent variable) with the frequency of Community Changes (independent variable) over time. It can be seen from the graph that for

Sumner and Woodson, the point of intersection between the frequency of Community Changes and the 30-day alcohol outcomes is in 2011. As the number of Community Changes increased over time, the 30-day alcohol use outcomes started decreasing. For intervention communities other than Sumner and Woodson that Community Changes and 30-day alcohol outcomes data points did not show a point of intersection during the study period.

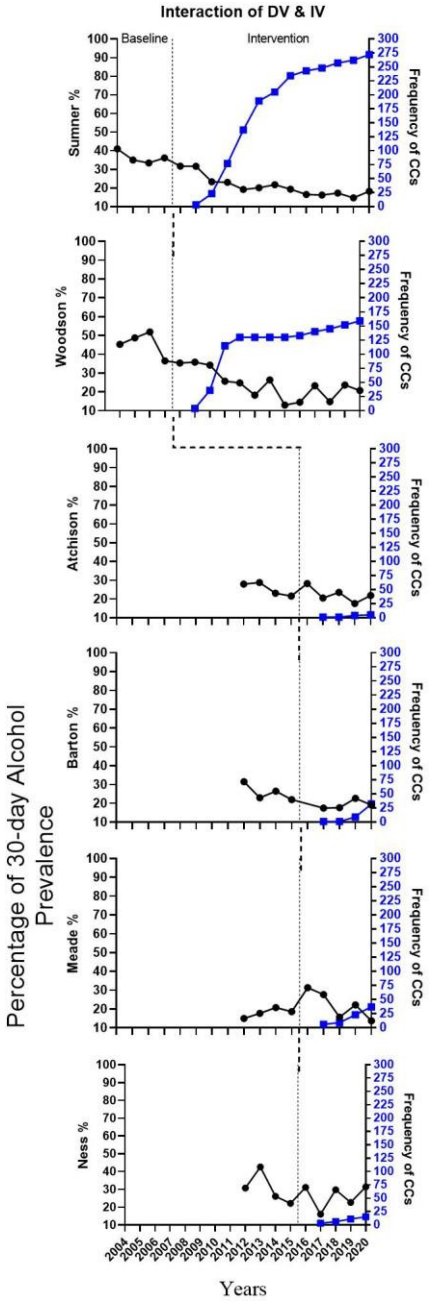

Figure 9: Interaction between Independent and Dependent Variable

Research Question Two: Factors that Contributed to the Capacity of the Community to Implement the Strategic Prevention Framework

Accomplishments pertaining to specific codes in the Community Checkbox were categorized by SPF phase. The activities may include Community Action (CA), Community

Changes (CC) or Development Activity (DA). Figure 10 displays the proportion of activities e undertaken by communities during the implementation of the underage drinking prevention intervention that was coded by SPF phase. Sumner County Drug Action Team (SCDAT) had the highest percentage of accomplishments (7.11%) related to capacity building efforts compared to all the other communities (0.23%-1.26%). Almost all communities accomplished most activities in the implementation phase compared to other phases.

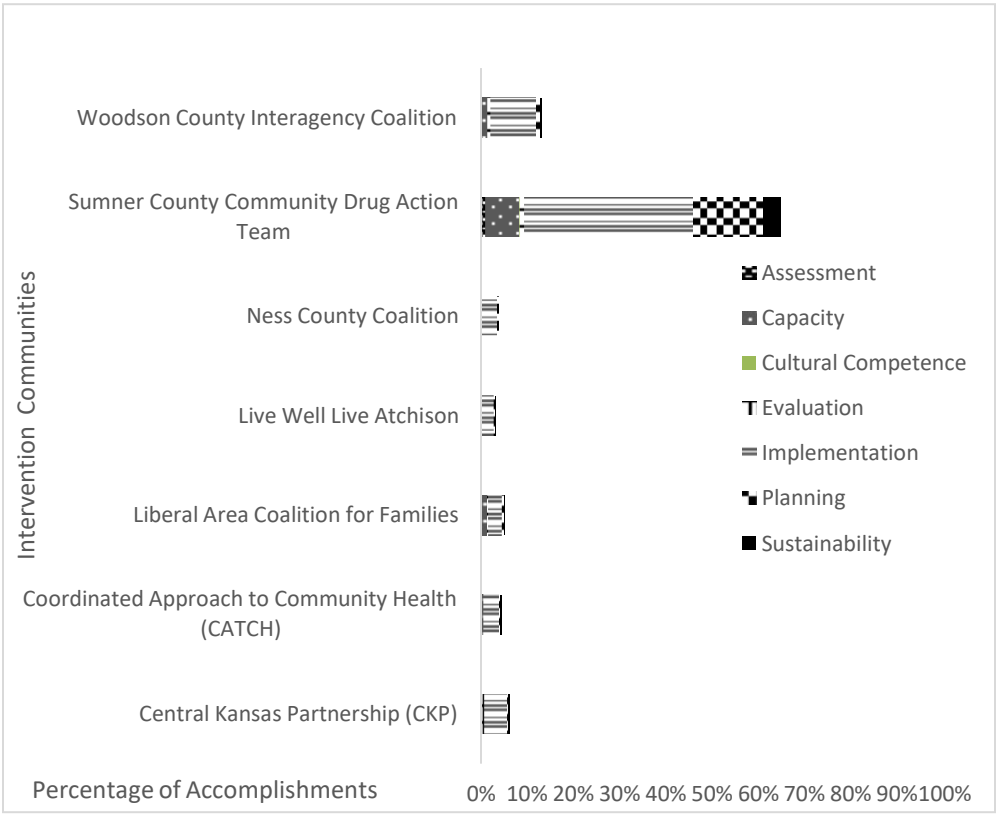

Figure 10: Implementation of SPF Phase Activities in Intervention Communities

Table 13 shows the involvement of community sectors in the implementation of underage drinking prevention interventions in the treatment communities. It was observed that intervention communities engaged with between six to 18 different community sectors during PFS Implementation. The highest engagement was observed with Sumner (n=18 sectors) while

Ness engaged with only 6 sectors. All communities engaged with more than a few community sectors during the implementation stage.

Table 12: Collaboration with Intervention Sectors

Sectors	Barton	Meade	Seward	Atchison	Ness	Sumner	Woodson
Business	■	■	■	■	■	■	■
Casino/Gaming Agency			■			■	
Civic/Volunteer Organizations	■	■	■	■		■	■
Courts/Judiciary System	■		■	■		■	
Healthcare Professional	■	■	■	■		■	■
Law Enforcement	■	■		■		■	■
LGBTQ serving organizations						■	
Media	■		■	■	■	■	■
Mental Health professionals	■	■	■	■		■	■
Military						■	
Parents	■	■	■	■	■	■	■
Religious Organizations	■	■	■	■		■	■
Schools	■	■	■	■	■	■	■
State, local, tribal government Agency	■	■	■		■	■	■
Substance Abuse Prevention Organizations	■		■	■		■	■
Tribal leaders, elders						■	
Youth	■	■	■	■	■	■	■
Youth serving organizations	■	■	■			■	■

Tri-Ethnic Community Readiness Scores

With respect to community readiness scores, five of the seven treatment communities completed a Tri-Ethnic Community Readiness Assessment at baseline and post-intervention.

Seward and Ness did not complete the readiness assessments. The change in scores is depicted in the graph below. Woodson, Sumner, and Meade showed the greatest change from baseline and subsequent movement in community readiness stages. Table 14 displays the community readiness stage pertaining to the readiness score.

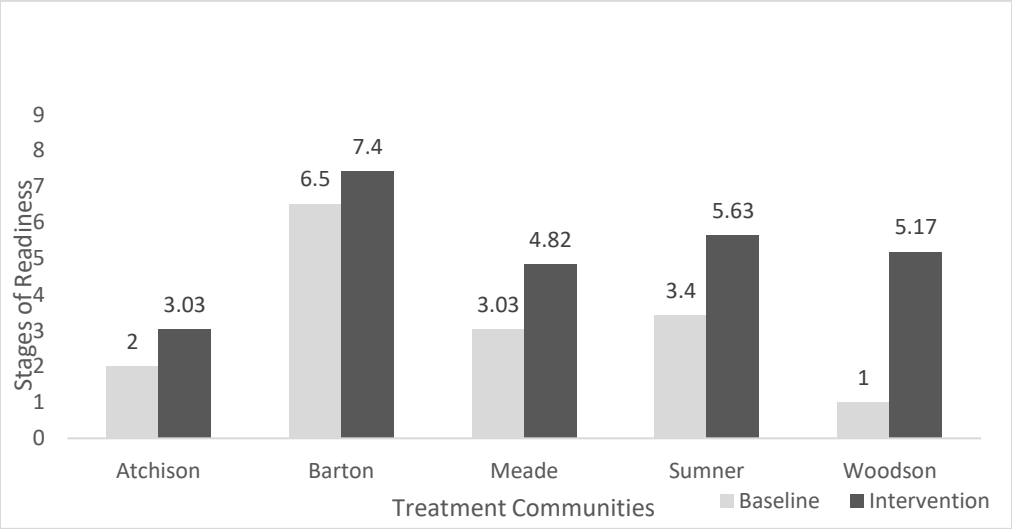

Figure 11: Tri-ethnic Community Readiness Scores for Intervention Communities

Table 13: Tri-Ethnic Model of Community Readiness Stages

Stages of Readiness	**Readiness Score**
No Awareness	1
Denial/Resistance	2
Vague Awareness	3
Preplanning	4
Preparation	5
Initiation	6
Stabilization	7

Confirmation/Expansion	8
Professionalization	9

The Tri-Ethnic Community Readiness Assessment also measures changes in five dimensions of community readiness such as community knowledge of efforts, leadership, community climate, community knowledge about the issue and resources related to the issue. Overall, the difference in scores from baseline to intervention ranged from 0.77 to 1.41 suggesting that there was an improvement in readiness across all the five dimensions in the counties. Sumner showed marked differences in changes in the dimensions such as with community knowledge of efforts (+4.35) while Woodson made similar progress in community knowledge of efforts (+4.6), leadership (+4.3) and community knowledge about the issue (+4.5). The change in scores from baseline to intervention across all dimensions are listed below.

Table 14: Change in Community Readiness Scores for Intervention Communities

Dimensions/ Coalitions	Atchison	Barton	Meade	Sumner	Woodson	Mean Change	SD
Community Knowledge of Efforts	+1.69	+1.4	+1.76	+4.35	+4.6	2.76	1.41
Leadership	+0.62	+2.3	+2.11	+0.8	+4.3	2.03	1.32
Community Climate	+1.53	+2.2	+2.16	+1.7	+3.7	2.26	0.77
Community Knowledge about the issue	+1.03	+3.3	+1.97	+2.4	+4.5	2.64	1.18
Resources related to the issue	+3.01	+1.6	+0.98	+0.1	+1.55	1.45	0.95
Overall Change	1.03	0.9	1.79	2.23	4.17	2.02	1.18

Discussion

Community Changes Over Time

The present study examined the facilitation of community changes (programs, practices, and policies) over time and their association with the prevalence of alcohol use. Results indicate that alcohol use decreased in intervention communities,especially with Sumner and Woodson showing a marked decrease compared to other communities. This trend was similar in both 30-day alcohol use, lifetime alcohol use and binge drinking outcomes. When considering the cumulative Community Changes in each community, the highest frequency is observed in Sumner and Woodson, which started implementation of interventions in 2007, followed by other communities that started implementation after 2015. In both the Sumner and Woodson communities, there was an association between the independent variable (Community Changes) and the dependent variable (alcohol use prevalence) based on visual inspection. As the frequency of Community Changes increased, the prevalence of alcohol use decreased. The point of intersection between dependent and independent variable on the graph denotes the time on the X-axis at which Community Changes may begin to influence alcohol use outcomes (Watson-Thompson et al., 2010). It is indicated in the graph that Sumner and Woodson may have implemented enough Community Changes over time to begin to influence alcohol use outcomes. Other communities that started intervention later in 2015 are not yet displaying an association; thereby, suggesting the need for the implementation of Community Changes to continue at a similar or higher rate in order to potentially contribute to improvements in alcohol use outcomes. In addition to programmatic factors, demographic factors such as overall county population, youth population in the target age group, and racial and ethnic diversity may have also influenced the rate of implementation of Community Changes.

With respect to types of Community Changes, Figure 4 suggests that fewer types of strategies (three or less) were implemented in intervention communities, except for Sumner and Woodson that implemented more strategies. Additionally, antecedent strategies were the most commonly used type of strategies implemented in the intervention communities. Compared to other intervention communities, Sumner and Woodson implemented more and different types of CSAP strategies (4 or more) including antecedent and consequent. Previous research suggests that environmental strategies that have a direct consequence are more effective in reducing alcohol use outcomes compared to antecedent only strategies that may reduce environmental risk factors such as alcohol availability but not reduce alcohol use (Spera et al., 2012). Therefore, these results may suggest that the observed marked decrease in alcohol use may have been supported through the implementation of multiple strategies, including the integration of also consequence-based strategies in the intervention communities.

The findings from the Community Change Sustainability Survey reveal that program, policy and practice changes (such as parental consent for KCTC participation during enrollment in school) and evidence-based strategies implemented through the school could be sustained without additional funding. However, strategies that needed to be funded, such as newspaper advertisements and billboards required funding from the business sector or through other grants. Additionally, findings from the sustainability strategy survey revealed that communities could tap into additional opportunities such as securing endowments or online giving. The findings from the sustainability strategy have implications for technical assistance opportunities to improve sustainability of the coalition.

Coalition Capacity

In terms of the effect of SPF implementation on coalition capacity, results indicate that supporting a framework that supported multi-sector collaboration may have helped to increase the coalition's capacity and the community's readiness to change target behaviors. The results related to increased sustainability are more pronounced in intervention communities such as Sumner that had a longstanding implementation and documented several activities aligning with the Capacity phase of SPF. In addition to implementing capacity-building activities, communities such as Woodson and Sumner also engaged with multiple sectors in their community. Collaboration with multiple community partners is a key indicator of coalition capacity and one of the grounding principles of SPF.

With respect to community readiness scores, all communities showed an improvement in community readiness stages although there was an association with rate of implementation of the intervention and the level of readiness. Additionally, participants also noted in the qualitative interviews that SPF implementation enhanced the coalition's capacity to engage with sub-populations.

Strengths of the study

The current study examined the effectiveness of SPF implementation on alcohol use outcomes for a period from 2004 to 2020 for intervention communities using a quasi-experimental design. There are a limited number of longitudinal studies that study the effects of community-based underage drinking prevention interventions on alcohol use outcomes for a time span of more than a decade. This study provides insight into the implementation of multi-component interventions, including the types and mix of strategies that may be more effective in influencing outcomes related to underage drinking. Additionally, the study has been conducted in natural settings, using participatory methods and in multiple communities, which makes it more

likely that the interventions may be sustained. The multiple baseline research design used in this study provides a description of the implementation process across time to better understand the potential associaton with the corresponding changes in alcohol use outcomes without masking the effects of the intervention. Finally, the study uses a quasi-experimental research design to test the implementation effects on alcohol use prevalence for communities, while also allowing group designs such as intervention and comparison designs to test statistical significance of the outcomes.

Limitations of the study

There are some limitations to this study. First, the study used self-reported measures such as surveys to measure alcohol prevalence. Previous studies have identified the challenge with recall bias and reactivity to self-reported measures (Anderson-Carpenter, 2014). The measures used in this study are similar to as in previous studies and there is still a gap with respect to identifying more objective data to examine effectiveness of the SPF intervention related to underage drinking outcomes. However, to minimize recall bias, the study used both 30-day alcohol use as well as lifetime alcohol use. Other objective data sources such as motor vehicle deaths for adolescents in the age group of 10- 17 years were analyzed, but it was too low of a rate of behavior with less than five incidents each year. Therefore, those data were not included in this study.

Second, assuring 50% participation in KCTC surveys for at least four baseline and intervention years respectively was a challenge. Participation varied across counties and by grade levels (i.e., across 6^{th} through 12^{th} grades). Although a minimum of 50% participation in KCTC surveys was used as a criterion for selection, it was calculated based on average participation

across school districts within the county. The fluctuation in participation across school districts and over the years, could have impacted the outcomes.

Second, with respect to recruiting participants, multiple staff transition in coalitions occurred over the period in which the study was conducted. Additionally, COVID-19 had a huge impact on coalition staffing. This was a challenge in recruiting coalition members for the qualitative interviews, which may be suggestive also of coalition capacity. Staff transitions might have also impacted documentation of accomplishments during the period of implementation. Communities such as Sumner that have been documenting in the Community Check Box for a longer period may have developed more capacity for recording accomplishments compared to newer communities that might still be acquiring the behavior in their repertoire.

Third, selection and maturation bias could not be minimized in this study. As noted in previous research in similar settings, randomization helps minimize selection bias, however this study did not use randomization. Participants were selected to receive the grant, based on criteria for low capacity and high need in Kansas. Also, there could be other extraneous implementation or broader policy changes influencing outcomes. Comparison communities were recruited for this purpose, to determine if changes in alcohol prevalence over time were greater in intervention communities compared to the comparison communities.

Areas of future research

First, this study examined the association of Community Changes with alcohol use outcomes and used the past 30-day alcohol use measure with the response option “At least once.” While this response allows for examining the prevention of underage alcohol use, data patterns of other answer responses (e.g.,1-2 occasions; 3-5 occasions; 40 or more occasions) may be useful in understanding harm reduction over the years as an area of future research. For instance,

it may help understand if the frequency of the consumption of alcohol was reduced or demonstrated improvement for the high consumption categories such as consuming 40 or more occasions in the last 30 days. Second, the study tested the overall effectiveness of implementing a multi-component strategy approach to prevention interventions. Future studies may examine evidence for the effectiveness of specific components or the combination (i.e., mix) across intervention components such as drug-free alcohol strategies. It may also be useful to study the dose-response relationship in outcomes across strategies. Community factors such as population size, demographic distribution, and other characteristics should be taken into account when interpreting influence on outcomes. This may help identify characteristics of successful interventions in different types of communiteis. Additionally, since SPF is implemented across the United States, it may be useful to compare the trends in underage drinking outcomes across the country, including in both intervention and non-intervention communities. These studies may help shed more light on some areas such as CSAP strategy implementation and measurement that are still in need of refinement. Finally, it is important to continue to track these communities over time to study patterns in alcohol use and to understand how interventions have sustained over time relative to improvements in outcomes.

Implications for Practice

Previous research indicates that an increase in the number of program, policy and practice changes implemented in the community are associated with decrease in alcohol consumption outcomes (Anderson-Carpenter, 2014). Customizing action planning to increase the number of potential program, policy and practice changes may help in facilitating progress towards desired outcomes. Additionally, it was noted in this study, as well as previous research that community changes that were consequenct-based tended to be more impactful on behavioral outcomes.

Therefore, assisting coalitions with implementing not only consequenct-based strategies, including policy changes may accelerate progress.

Second, there is a need to implement selective or indicated strategies with specialized or vulnerable audiences, such as DUI offenders, adolescents in the juvenile system, and cross-over youth. Study results indicate that universal strategies were most commonly implemented. However, little is known about specialized audiences and their needs. Similarly, with CSAP strategies, prevention education, media and awareness and environmental strategies were prioritized compared to drug-free alternatives and problem identification and referral. Emphasis on other strategies may help improve intermediate outcomes such as increasing the age of initiation into alcohol by adolescents.

Finally, coalitions that sustained implementation for a longer duration showed increase in community readiness and capacity, in addition to decrease in alcohol use prevalence. Therefore, providing maintenance funds after original grant funding to sustain previously implemented community changes or service provided will allow communities to progress towards outcomes.

Conclusion

This study examined the effectiveness of implementing the SPF on alcohol use outcomes in intervention communities. The results suggest that there were more substantial reductions in alcohol use prevalence in the two intervention communities that implemented for a longer duration showed more marked decreases in underage drinking-related outcomes. This is one of the few longitudinal studies that examine the effectiveness of SPF. This study emphasizes the importance of implementing multi-component interventions using a variety of strategies and through sustained implementation over a period of time. The study also has implications for

intervention communities to sustain their implementation and for funding agencies to consider supporting maintenance of implementation.

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Appendix A: Coding Instructions for Accomplishments

Adapted from Anderson-Carpenter, K. D. (2014). Examining the Effects of a Comprehensive Community Intervention on Underage Drinking in Seven Kansas Communities. (3665238 Ph.D.), University of Kansas, Ann Arbor

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 Media communications that provide information about the initiative's issue and ways to address it are scored as an SP if facilitated/ contributed by the initiative (e.g., media or social marketing campaign facilitated/ contributed by the initiative).

SP7 Excluded as Services Provided are Media Coverage (M) and Resources Generated (RG) (e.g., a grant or donation to the initiative) that occur internal to the initiative.

Examples of Services Provided:

- ✓ The East Central Initiative held a conference to educate Emporia's community members about the dangers of prescription drugs. The conference informed attendees about proper disposal of drugs. (This is a Service Provided because the conference provided information to the community. See coding instructions for Direct SP1.2 and SP1.4.)

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

workshops provided information and training to social workers in the community served by the initiative. See coding instructions for Direct SP1.2and SP1.4.)

- ✓ The DFC Substance Abuse Prevention Coalition held a conference on evidence-based substance abuse programs for 20 community agencies. (This is a Service Provided because the conference provided information to the community. See coding instructions for Direct SP1.2 and SP1.4.)

- ✓ The Meth Project team members led a workshop on evidence-based meth abuse prevention programs for drug treatment centers in Kansas. (This is a Service Provided because the workshop provided information and training to treatment centers in the community served by the initiative. See coding instructions for Direct SP1.2 and SP1.4.)

Examples of items <u>not</u> 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 for Direct SP1.1. This item would be coded as O.)

- ✓ 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 for Direct SP1.1. This entry would be coded O.)

- ✓ Ashlee Gann from the FACT coalition received training from Momina Sims on the Online Support and Documentation System in Hillsboro, KS. (Ashlee is not providing any type of service to the community. See coding instruction Direct SP1.2. This training will further the work of the FACT coalition. This entry would be coded as DA.)

Community Actions (CA)

<u>General Definition</u>: Activities performed by members of the initiative or group to bring about a new or modified program, policy, or practice in the community or system related to the initiative or group's goals and objectives. Events categorized as Community Actions document the extensive effort it takes to make change in the community.
Community Actions include acting directly to make changes in the community, actively lobbying, or advocating with change agents. Examples include personal contacts, phone calls, demonstrations, petitions, and letter writing.

<u>Coding Instructions</u>:

CA1 Community Actions must meet all of the following criteria:
- CA1.1 have occurred (not just been planned), and
- CA1.2 be related to the initiative's goals and objectives, and
- CA1.3 be taken to bring about Community Change, and

CA1.4 are facilitated by individuals who are members of the initiative or acting on behalf of the initiative.

CA2 Specifically excluded as CA's are actions taken to produce Organizational Changes (e.g., new by-laws, completed action plan, program materials), and Resources Generated (e.g., a grant or donation to the initiative) that occur internal to the initiative

CA3 If presentations to community audiences include generating changes to be made in the community (e.g., listening sessions) or are aimed specifically at some change in the community (relative to the group's mission), then it is a Community Action. If not, a workshop or other presentation is coded as a Service Provided.

CA4 If two or more individuals are documenting a common set of activities and multiple entries of the same action are being entered/documented: The recorders involved should discuss how to record the action as a single entry (e.g., the same action taken toward the same school official). If there is disagreement, a data coordinator should resolve differences to best represent what actions were taken to change the environment in a way that does not count the same event multiple times.

CA5 Collaboration with community members (people external to the initiative) to set new agendas for the community are Community Actions. If this is the first occurrence of collaboration in the community, however, it could be a Community Change (a change in practice) as well as a Community Action.

CA6 Actions taken to keep the group going--working on bylaws, soliciting funding for the group, or holding meetings among members of the group (e.g., committee, coalition)--are not considered to be Community Actions since they do not contribute directly to changes in the community related to the group's goals and objectives. Internal meetings among group members are generally not considered Community Actions.

CA6.1. Exceptions occur when members of groups targeted for change are also involved in the initiative and its committees and task forces. For example, at a committee meeting, an intervention for youth substance abuse prevention might be discussed with a representative of the police department. Since a representative of a community sector to be changed (i.e., law enforcement) was involved, it would be considered a Community Action.

Examples of Community Actions:

- ✓ Three members of the Wichita Initiative met with a group of five local retailers that sell books featuring drinking games. The retail store representatives will consider discontinuing the sale of these books. A follow up conference call is schedule for next week. (Community Action because it targets a practice change. See coding instruction CA1.3.)

- ✓ Members of the Topeka Youth Advocates coalition asked local merchants in Topeka to display signs of the drug free community initiative. The Youth Advocates wanted to visually display to the community the strength of their drug free community initiative. (Community Action because it is directly related to a Community Change relevant to the mission of drug free communities. See coding instruction CA1.3 and CA1.2.)

- ✓ Promise Community Coalition members called their local legislators advocating for support of the Social Host Liability policy change. This policy is directly related to our goals because it ensures that those people who provide alcohol to anyone under the age of 21 will be held accountable. The Coalition feels stronger policies will help reduce the prevalence of underage drinking in their community. (Community Action because it is directly related to a Community Change relevant to the mission of preventing underage alcohol use. See coding instruction CA1.3 and CA1.2.)

- ✓ A third town hall meeting was held with the Hope Coalition and residents of the community to discuss how to increase opportunities for the community to be educated on the dangers of methamphetamine production. Ideas generated from the community were added to Hope Coalition's action plan. (Community Action because the actions were intended to bring about a Community Change, relative to substance abuse education. See coding instruction CA3.)

Examples of items <u>not</u> coded as Community Actions:

- ✓ Little Apple Task Force's subcommittee held a meeting to discuss community policies that may be related to adolescent alcohol use. Little Apple Task Force's main goal is increasing the quality of public education. (This is not a Community Action because no one external to the initiative (such as a policymaker) was present and it was not part of the mission of Little Apple Task Force. See coding instruction CA6. This entry would be coded O.)

- ✓ Maria Holmes, executive director of Safe Streets Coalition, developed a database to record and track instances of local crime. (This is not a Community Action since Maria's actions were not taken to directly make changes in the community. See the definition and coding instruction CA 1.3. This entry would be coded O.)

- ✓ The Derby Prevention Initiative's School Committee held a meeting to discuss the procedures for electing a chairperson. The committee hopes to have the new procedures in place for the upcoming election. (This is not a Community Action because it related to change in the committee, not the community. See coding instructions CA1 and CA6. This entry would be coded O.)

- ✓ Representatives of the Promise Community Coalition will contact the Green Valley Neighborhood Association to arrange a meeting to discuss the implementation of a support group. The coalition hopes to have the support group in place within a year. (This item is a future event, not an action that already occurred. See coding instruction CA1.1. This entry would be coded O.)

Media (M)

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

Coding Instructions:

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 non-person-to-person 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).

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.)

Examples of items not 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 O.)
- ✓ 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 O.)

Appendix B: Sustained Community Changes Survey

Adapted from: Keene Woods, N., Watson-Thompson, J., Schober, D. J., Markt, B., & Fawcett, S. (2014). An empirical case study of the effects of training and technical assistance on community coalition functioning and sustainability. *Health Promotion Practice*, *15*(5), 739-749.

Directions: Please indicate the sustainability (i.e., duration and maintenance) of the documented community changes facilitated by <name of the coalition> between 2007 and 2020. For each community change, please indicate if it is currently sustained (i.e., highlight or circle yes, no or don't know). Also, please provide any additional comments that may be helpful in understanding the context in which the community change was (or wasn't) sustained.

ID #	Date Community Change was Established	Description of the Community Change (i.e., new or modified program, policy, or practice)	In the past year, has the program, policy or practice change been maintained (still present) in the neighborhood?	Comment:
1			Yes No Don't Know	
2			Yes No Don't Know	
3			Yes No Don't Know	
4			Yes No Don't Know	

Appendix C: Interview Questions Outline

ANALYZING THE CONTRIBUTION TO OUTCOMES
What Does It Mean?
Introduction and rationale

> *"Let's look at how the community/system changes and other activities are distributed. This will help us get a better idea of their contribution to the community-level outcome we are addressing."*

Let's examine the quality and type of activities facilitated by the coalition this reporting period related to its goals of reducing risk adolescent substance and alcohol use. Let's consider this question:

> *How are community/system changes and other documented activities contributing to the efforts to reduce adolescent substance use?*

Review Online Graphs Showing Distribution
Review the amount/distribution of changes by CSAP Strategy:
Create and review pie chart showing distribution

> *"Here is the distribution of activities we are seeing (which includes CC, SP, CA, DA, and M) by CSAP strategy. Most of the changes and activities address the strategy of …")*

Review appropriateness

> *"Is this what you anticipated to see? If yes, why so? If not, why not?"*
> *"Is this consistent with your action plan?"*

Consider adjustments

> *"Are there any strategies that were identified in your action plan that you haven't supported during this reporting period? Why or Why not?" "Should we do anything differently in our plans and activities?"*

Review the amount/distribution of changes by Risk/Protective factor for CC:
Create and review pie chart showing distribution

> *"Here is the distribution of changes and activities we are seeing by influencing or contributing factor for substance abuse. Most of the changes and activities address the influencing or contributing factor of …")*

Review appropriateness

> *"Is this what you hoped to see? If yes, why so? If not, why not?"*
> *"Is this consistent with your action plan?"*

Consider adjustments

> *"Are there any influencing or contributing factors that were identified in your action plan that you haven't supported during this reporting period? Why or Why not?"*
> *"Should we do anything differently in our plans and activities?"*

[For support in making adjustments based on what we are seeing, you may use the "Solve a Problem" (Troubleshooting) feature of the Workstation. Click on "Some Problems with Community Evaluation and Sustaining the Effort"; then review more specific issues under "Some Issues with the Distribution and Contribution of Community Changes"—especially "We don't know if the interventions use the strongest approaches to changing behavior."]
Record answers.

Review the amount/distribution of community activities (CC, SP) by primary sector through which the activity was facilitated.
Create and review pie chart showing distribution
"Here is the distribution of changes we are seeing by sector. Most of the changes occur in the sector of …"
Review appropriateness
"Is this what you hoped to see? If not, why not?" "Does this seem accurate and complete?"
Consider adjustments
"Should we do anything differently in our plans and activities?" [For support in making adjustments based on what we are seeing, you may use the "Solve a Problem" (Troubleshooting) feature of the Workstation. Click on "Some Problems with Community Evaluation and Sustaining the Effort"; then review more specific issues under "Some Issues with the Distribution and Contribution of Community Changes"—especially "The interventions are not being delivered through those sectors that can best reach people."]
Record answers.

PROVIDING SUPPORT AND GUIDANCE FOR THE WORK
What Challenges Are We Facing?
Troubleshooting of Problems

Identify pressing problems and challenges the group is facing. [Reference E2 of Quarterly Report]
"What problems and challenges are you/we facing? Were there any obstacles of challenges encountered during this reporting period at either the level of the community or coalition? If so, please describe.
See "Issues" in CTB Troubleshooting Guide
Ask questions to help clarify the issues/contributing factors
See "Questions" in CTB Troubleshooting Guide
Identify best processes that may need to be more fully implemented by the group.
[For more on factors or mechanisms that others have noted, go to the "Explore Best Processes" feature of the Workstation or Community ToolBox. Also, may refer to community readiness factors identified during the assessment phase of the SPF to trigger additional comments.]
Consider activities and how-to information that could contribute to improvement
Has the coalition used ODSS data in the past six months?
If so, how have the data been used? With what audiences? What tools have been used (listings, graphs, reports)?
If not, what would be helpful to support your organization in more regular use of data documented in the system?
Record answers.

Appendix D: Sample Sustainability Strategy Survey

Adapted from: Paine-Andrews, A., Fisher, J. L., Campuzano, M. K., Fawcett, S. B., Berkley-Patton, J. (2000). Promoting sustainability of community health initiatives: An empirical case study. Health Promotion Practice, 1, 248-258.

Instructions: Please mark an appropriate response indicating at what level the strategy has been used to support sustainability of <name of the coalition> and its activites (e.g., programs).

Tactics for Sustainability	**Description**	**Rating**				
		1- Never Used	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
1. Share positions & resources	Share staff positions, space, equipment, or other resources with organizations with similar goals.	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
2. Become line item in existing budget	Convince another organization to pick up part of the expenses of running the initiative	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
3. Incorporate activities or services in organizations with a similar mission	Incorporate the initiative's activities or services into another organization with a similar mission	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
4. Apply for grants	Develop grant applications for grantmaking agencies.	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
5. Tap into personnel resources	Recruit people or positions in other organizations that can be shared at low or no cost (e.g., clerical staff, volunteers)	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
6. Solicit in-kind support	Seek goods and services the organization would otherwise have to purchase (e.g., volunteers, materials).	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*

7. Develop & implement fundraisers	Identify and offer products, services or events that will inspire others to contribute money to the organization.	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
8. Pursue third-party funding	Solicit third parties not actually involved with the effort, and not directly benefiting from it, to provide resources for services	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
9. Develop fee-for-service structure	Require clients who receive services to pay for them	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
10. Acquire public funding	Receive funding from a public entity/agency (e.g., city council)	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
11. Secure endowments & planned giving arragements.	Acquire funds through large investments in which the interest can be used by the organization.	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
12. Establish a donor or membership base.	Donors or members provide fees, dues or gifts to provide funds to the organization	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*
13. Provide online giving opportunities	Use internet options to acquire donations.	*1- Never Used*	*2- Rarely Used*	*3- Sometimes Used*	*4- Often Used*	*5- Highly Used*

Appendix E: Tri-ethnic Community Readiness Model

Adapted from Community Tool Box: Chapter 2. Other Models for Promoting Community Health and Development | Section 9. Community Readiness | Main Section | Community Tool Box (ku.edu)

Tool: Scoring Sheet and Anchored Rating Scales

Community Readiness Assessment Scoring Sheet

Scorer:_____Date:_____

INDIVIDUAL SCORES: Record each scorer's independent results for each interview for each dimension. The table provides spaces for up to six interviews.

Interviews	#1	#2	#3	#4	#5	#6
Dimension A						
Dimension B						
Dimension C						
Dimension D						
Dimension E						
Dimension F						

COMBINED SCORES: For each interview, the two scorers should discuss their individual scores and then agree on a single score. This is the COMBINED SCORE. Record it below and repeat for each interview in each dimension. Then, add across each row and find the total for each dimension. Use the total to find the calculated score below.

Interviews	#1	#2	#3	#4	#5	#6	TOTAL
Dimension A							
Dimension B							
Dimension C							
Dimension D							
Dimension E							
Dimension F							

CALCULATED SCORES: Use the combined score TOTAL in the table above and divide by the number of interviews conducted. Add the calculated scores together and enter it under total.

Stage Score

TOTAL Dimension A_____÷ # of interviews _____ =

TOTAL Dimension B_____÷ # of interviews _____ =

TOTAL Dimension C_____÷ # of interviews _____ =

TOTAL Dimension D_____÷ # of interviews _____ =

TOTAL Dimension E_____÷ # of interviews _____ =

TOTAL Dimension F_____÷ # of interviews _____ =

Average Overall Community Readiness Score: _____

OVERALL STAGE OF READINESS: Take the TOTAL calculated score and divide by 6 (the number of dimensions). Use the list of stages below to match the result with a stage of readiness. Remember, round down instead of up.

TOTAL Calculated Score_____÷ 6 = _____

Score Stage of Readiness

- No Awareness
- Denial / Resistance
- Vague Awareness
- Pre-planning
- Preparation
- Initiation
- Stabilization
- Confirmation / Expansion
- High Level of Community Ownership

COMMENTS, IMPRESSIONS, and QUALIFYING STATEMENTS about the community:

Anchored Rating Scales for Scoring Each Dimension

Dimension A. Existing Community Efforts

1. No awareness of the need for efforts to address the issue.

2. No efforts addressing the issue.

3. A few individuals recognize the need to initiate some type of effort, but there is no immediate motivation to do anything.

4. Some community members have met and have begun a discussion of developing community efforts.

5. Efforts (programs/activities) are being planned.

6. Efforts (programs/activities) have been implemented.

7. Efforts (programs/activities) have been running for several years.

8. Several different programs, activities and policies are in place, covering different age groups and reaching a wide range of people. New efforts are being developed based on evaluation data.

9. Evaluation plans are routinely used to test effectiveness of many different efforts, and the results are being used to make changes and improvements.

Dimension B. Community Knowledge of the Efforts

1. Community has no knowledge of the need for efforts addressing the issue.

2. Community has no knowledge about efforts addressing the issue.

3. A few members of the community have heard about efforts, but the extent of their knowledge is limited.

4. Some members of the community know about local efforts.

5. Members of the community have basic knowledge about local efforts (e.g., purpose).

6. An increasing number of community members have knowledge of local efforts and are trying to increase the knowledge of the general community about these efforts.

7. There is evidence that the community has specific knowledge of local efforts including contact persons, training of staff, clients involved, etc.

8. There is considerable community knowledge about different community efforts, as well as the level of program effectiveness.

9. Community has knowledge of program evaluation data on how well the different local efforts are working and their benefits and limitations.

Dimension C. Leadership (includes appointed leaders & influential community members)

1. Leadership has no recognition of the issue.

2. Leadership believes that this is not an issue in their community.

3. Leader(s) recognize(s) the need to do something regarding the issue.

4. Leader(s) is/are trying to get something started.

5. Leaders are part of a committee or group that addresses this issue.

6. Leaders are active and supportive of the implementation of efforts.

7. Leaders are supportive of continuing basic efforts and are considering resources available for self-sufficiency.

8. Leaders are supportive of expanding/improving efforts through active participation in the expansion/improvement.

9. Leaders are continually reviewing evaluation results of the efforts and are modifying support accordingly.

Dimension D. Community Climate

1. The prevailing attitude is that it's not considered, unnoticed or overlooked within the community. "It's just not our concern."

2. The prevailing attitude is "There's nothing we can do," or "Only 'those' people do that," or "We don't think it should change."

3. Community climate is neutral, disinterested, or believes that the issue does not affect the community as a whole.

4. The attitude in the community is now beginning to reflect interest in the issue. "We have to do something, but we don't know what to do."

5. The attitude in the community is "we are concerned about this," and community members are beginning to reflect modest support for efforts.

6. The attitude in the community is "This is our responsibility" and is now beginning to reflect modest involvement in efforts.

7. The majority of the community generally supports programs, activities, or policies."We have taken responsibility."

8. Some community members or groups may challenge specific programs, but the community in general is strongly supportive of the need for efforts. Participation level is high. "We need to keep up on this issue and make sure what we are doing is effective."

9. All major segments of the community are highly supportive, and community members are actively involved in evaluating and improving efforts and demand accountability.

Dimension E. Community Knowledge about the Issue

1. Not viewed as an issue.

2. No knowledge about the issue.

3. A few in the community have some knowledge about the issue.

4. Some community members recognize the signs and symptoms of this issue, but information is lacking.

5. Community members know that the signs and symptoms of this issue occur locally, and general information is available.

6. A majority of community members know the signs and symptoms of the issue and that it occurs locally, and local data are available.

7. Community members have knowledge of, and access to, detailed information about local prevalence.

8. Community members have knowledge about prevalence, causes, risk factors, and

9. Community members have detailed information about the issue as well as information about the effectiveness of local programs.

Dimension F. Resources Related to the Issue

(people, money, time, space, etc.)

1. There is no awareness of the need for resources to deal with this issue.

2. There are no resources available for dealing with the issue.

3. The community is not sure what it would take, (or where the resources would come from) to initiate efforts.

4. The community has individuals, organizations, and/or space available that could be used as resources.

5. Some members of the community are looking into the available resources.

6. Resources have been obtained and/or allocated for this issue.

7. A considerable part of support of on-going efforts are from local sources that are expected to provide continuous support. Community members and leaders are beginning to look at continuing efforts by accessing additional resources.

8. Diversified resources and funds are secured and efforts are expected to be ongoing. There is additional support for further efforts.

9. There is continuous and secure support for programs and activities, evaluation is routinely expected and completed, and there are substantial resources for trying new efforts.

Appendix F: KCTC Outcomes

Intervention County	Baseline Mean	Treatment Mean	Change in 30-Day Use
Change in 30-Day Alcohol Use			
Atchison	25.36	22.49	2.87
Barton	25.71	19.26	6.45
Meade	17.99	24.22	-6.23
Ness	30.38	24.89	5.49
Sumner	36.38	27.40	8.98
Woodson	45.60	32.80	12.80
Change in Lifetime Alcohol Use			
Atchison	46.22	42.49	3.73
Barton	43.44	35.60	7.84
Meade	37.22	44.00	-6.78
Ness	54.07	51.54	2.53
Sumner	58.00	50.99	7.01
Woodson	70.70	56.60	14.10
Change in Lifetime Alcohol Use			
Atchison	13.12	13.70	-0.58
Barton	15.00	9.93	5.07
Meade	9.05	14.07	-5.02
Ness	18.12	12.66	5.47
Sumner	20.33	15.22	5.11
Woodson	29.10	23.13	5.98

Appendix G: Sample Community Logic Model

What?	Why? Risk	How ?	T o
From the assessment process, define your area of need related to block grant priority areas (underage drinking and/or youth marijuana use)	***From the box at the bottom of the logic model, check the priority risk factor(s) underlying use of this***	***Describe the evidence-based strategies that will target the priority risk factors in order to reduce use of this substance.***	***List the long term goals for your community prevention efforts – the outcome of successful strategy implementation (Reduction in underage drinking and/or youth marijuana use)***
17.3 % of Sumner County students in grades 6, 8, 10, and 12 reported using alcohol, **at least once**, within the past 30 days.	11.28% of Sumner County students in grades 6, 8, 10, and 12 reported **NO RISK** of harming themselves (physically or in other way) if they take one or two drinks of an	• Botvin Life Skills • Lions Quest • ItMatters Media Campaign • Sticker Shock – awareness for adults/parents concerning social hosting & having clear rules about alcohol use	The percentage of youth in Sumner County reporting drinking alcohol **at least once** in the past 30 days will decrease by 2 percentage points from 17.3% to 15.3% by September 30, 2020.
6.54 % of Sumner County students in grades 6, 8, 10, and 12 reported using	16.25% of Sumner County students in	• Botvin Life Skills • Lions Quest • ItMatters Media	By September 30, 2020, the percentage of students in Sumner County in grades 6, 8, 10, and 12 reporting
What?	**Why? Risk**	**How? Strategies**	**To what end? Long Term Goals**

From the assessment process, define any alcohol or marijuana co-occurring area of need (suicide or problem gambling prevention/mental health	***List the priority risk factors underlying the co-occurring are of need. Provide data to***	***Describe the evidence-based strategies that will target the priority risk factors in order to reduce area of need.***	***List the long-term goals for your community prevention efforts – the outcome of successful strategy implementation***
In 2017, 28.59% of students in grades 6, 8, 10, and 12 reported that they felt so sad or hopeless almost every day for two weeks or more in a row that they	In 2017, 17.89% of students in grades 6, 8, 10, and 12 reported that their families have NO clear rules about alcohol and drugs.	Lion's Quest program – Fosters a positive learning environment, teaching social and emotional skills, promoting prosocial behavior, and preventing drug and alcohol abuse.	The percentage of youth in Sumner County in grades 6, 8, 10, and 12 reporting feeling so sad or hopeless almost every day for two weeks or more in a row will decrease by 1.0 percentage points from a baseline of 28.59% in 2017 to 27.59% in 2020.
List other strategies currently being implemented in your community.			
SADD, DARE, It Matters Media Camilies, Mental Health/ACES			

Appendix H: Sample PFS 2015 ACTION PLAN (Sumner County Drug Action Team)

Strategy Name: Botvin Life Skills			
Outcome statement (Goal) relating to Youth Substance Use: The percentage of youth in Sumner County reporting drinking alcohol **at least once** in the past 30 days will decrease by 2 percentage by September 30, 2020. Percentage will decrease from 16.2% to 14.2% By September 30, 2020, the percentage of students in Sumner County in grades 6, 8, 10, and 12 reporting using marijuana at least once within the past 30 days will decrease by one percentage point from 6.83% to 5.83%.			
Outcome statement (Objectives) relating to Targeted Risk Factor(s): In 2016, 11.77% of Sumner County students in grades 6, 8, 10, and 12 reported NO RISK of harming themselves (physically or in other way) if they take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day. By September 30, 2018 this percentage will decrease by 1 percentage point – from 11.77% to 10.77%. In 2016, 17.36% of Sumner County students in grade 6, 8, 10, and 12 reported NO RISK of harming themselves (physically or in other ways) if they smoke marijuana regularly. By September 30, 2018 this percentage will decrease 1 percentage point – from 17.36% to 16.36%. 14.85% of Sumner County students in grades 6, 8, 10, and 12 reported that their family does **NOT** have clear rules about alcohol and drug use. By September 30, 2018 this percentage will decrease by 1 percentage point from 14.85% to 13.85%			
What is the measure(s) for the objective?	**Where will you get the data?**	**When is data collected?**	**Who will make sure this happens?**
Proportion of youth in grades 6, 8, 10, and 12 responding use of alcohol at least once within the past 30 days?	KCTC Student Survey	Annually – December	• Coalition Staff • County School Districts • Greenbush KCTC Staff
Proportion of youth in grades 6, 8, 10, and 12 responding their family does NOT have clear rules about alcohol and drug use.	KCTC Student Survey	Annually – December	• Coalition Staff • County School Districts • Greenbush KCTC Staff
Proportion of youth in grades 6, 8, 10, and 12 reporting No Risk of harming themselves if they take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day.	KCTC Student Survey	Annually – December	• Coalition Staff • County School Districts • Greenbush KCTC Staff

Proportion of youth in grades 6, 8, 10, and 12 reporting No Risk of harming themselves if they smoke marijuana regularly	KCTC Student Survey	Annually – December	• Coalition Staff • County School Districts • Greenbush KCTC Staff
Proportion of youth in grades 6, 8, 10, and 12 responding having five or more drinks in a row on at least one occasion within the past two weeks.	KCTC Student Survey	Annually – December	• Coalition Staff • County School Districts • Greenbush KCTC Staff
Proportion of participants demonstrating change in knowledge, attitude, skills, or behavior.	Program Pre/Post surveys	Prior to program implementation and again at program completion	SCCDAT staff will order surveys from Greenbush and return once completed
Number of schools and students participating in Life Skills Program	Individual schools & teachers implementing program	Program completion	• Coalition Staff • Implementing teachers will report to SCCDAT Staff

KEY ACTION STEPS

Activity/Action Steps: What steps need to take place in order to effectively implement the strategy?	**Target Date**	**Persons/Groups to be Involved (* responsible party)**
Administer KCTC Student survey to county youth in grades 6, 8, 10, and 12.	December 2017-January 2018	• Coalition Staff • County School Districts • Greenbush KCTC Staff
Identify and meet with at least five key Sumner County High School and Middle Schools administrative staff and school district staff to gain support for the program.	July 2017 (Annually)	• Coalition Staff • County School Administration
Contact High schools and Middle Schools in Sumner County to identify appropriate staff to be trained for LifeSkills Training program implementation (as needed).	July – December 2017	• Coalition Staff • County School Administration
Order pre/post student surveys from Greenbush. Deliver to school districts implementing the program.	December 2017	• Coalition Staff

Activity/Action Steps: What steps need to take place in order to effectively implement the strategy?	**Target Date**	**Persons/Groups to be Involved (* responsible party)**
Order appropriate LifeSkills Training materials for implementation at schools implementing the program.	December 2017	• Coalition Staff
Set training dates (as needed) for schools that will be implementing and organize logistics.	January 2018	• Coalition Staff • County School Administration
Conduct training sessions (as needed) for Elementary, Middle School, and high school and distribute materials.	January 30-March 2018	• LifeSkills Trained Facilitators • Selected school staff
Complete pre-surveys on all students participating in implementation of program before beginning LifeSkills lessons.	March 2018	• LifeSkills Trained Facilitators • Coalition Staff
Gather pre-surveys and send to evaluator (Greenbush).	March 2018	• Coalition Staff
Implement LifeSkills Training based on the grade level curriculum.	Beginning March 2018	• LifeSkills Trained Facilitators • Coalition Staff
Complete Fidelity checklist in schools/classes implementing program.	Beginning March 2018	• Trained Coalition Members
Complete post-surveys on all students participating in implementation of program at end of LifeSkills lessons.	May 2018	• LifeSkills Trained Facilitators • Coalition Staff
Gather post-surveys and send to evaluator (Greenbush)	May 2018	• Coalition Staff
Host program training of any new staff in participating school districts using trained trainers in county communities	August-September 2018	• LifeSkills Trained Staff • Participating county school districts • Coalition Staff
Work with grant evaluators to review reports and evaluate program effectiveness. Develop brief report to share with community and stakeholders regarding LifeSkills Program.	August-September 2018	• Coalition Staff • Greenbush Grant Evaluator