A Mixed Methods Examination of Strengths-Based Prevention Training in a Youth Recreation Program

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A MIXED METHODS EXAMINATION OF STRENGTHS-BASED PREVENTION TRAINING IN A YOUTH RECREATION PROGRAM

by

Daniel S. Payzant

A THESIS

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A MIXED METHODS EXAMINATION OF STRENGTHS-BASED PREVENTION TRAINING IN A YOUTH RECREATION PROGRAM

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The purpose of this study was to examine the effectiveness of strengths-based prevention training within the context of a youth recreation program and to compare and contrast two evaluation approaches: traditional pretest—posttest and retrospective pretest—posttest. A mixed methods triangulation design with data transformation was utilized. Quantitative methods included a traditional pretest conducted at program intake and a retrospective pretest and posttest survey completed by participants at the end of the program. One-on-one interviews were also conducted with a randomly selected subset of the participants to provide qualitative data for the study.

While discrepancies were noted between the results of each measure, youth generally reported higher levels of knowledge, skills, and potential for positive behavior after participation in Health Rocks!® and recreation program activities than they did before the program. Even for those participants who did not report increases, strengths were likely to have been previously attained elsewhere and participation in program activities may have played a reinforcing role. This study also supports literature that suggests potential contamination of results due to response shift bias when traditional pretest methodology is used. Results indicate that a retrospective pretest—posttest design is useful and might be more appropriate than a traditional pretest—posttest design when
examining self-reported changes in participant knowledge, skill, and potential for positive behaviors.
Acknowledgements

I am extremely grateful to Dr. Yan Xia for her thoughtful guidance. Thank you also to Drs. Maria de Guzman and Kathleen Lodl for their contributions as members of my thesis committee, and to my family, friends, and colleagues for all the ways in which they have provided me with generous support. This project would not have been possible without the cooperation of the Lincoln Parks and Recreation Department.
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Chapter 1

Introduction

Rates of tobacco, alcohol, and other drug use among youth have generally declined since the early 1990s; however, young people continue use these substances in significant numbers and some start at very young ages (Centers for Disease Control and Prevention, 2008). Additional work needs to be done to continue the decline and to prevent the current trend from reversing. There is a plethora of information, research, and programs that are concerned with providing optimal benefit to youth and reducing health-risk behaviors that young people confront during adolescence (Benson, 2006). In particular, two approaches exist that are aimed at encouraging the healthy development of youth and reducing risk behaviors: promotion and prevention (National Research Council and Institute of Medicine, 2002).

Promotion is commonly associated with a positive youth development approach, that is, strength-based programming that provides the supports and opportunities needed for all young people to achieve healthy outcomes (Hamilton, Hamilton, & Pittman, 2004; National Research Council and Institute of Medicine, 2002). Prevention programs typically target a specific risk behavior and provide interventions aimed at eliminating it (National Research Council and Institute of Medicine, 2002). Often these two approaches are pitted against one another as opposite frameworks for working with youth (National Research Council and Institute of Medicine, 2002); however, a coordinated approach that utilizes each has been suggested for assisting youth achieve the greatest developmental benefit (National Research Council and Institute of Medicine, 2002). Research also suggests that a positive youth development framework plays an important
role in in both promotion and prevention, especially with regard to tobacco and other drug use (Schwartz et al., 2010).

This study examines a youth recreation program as an environment that might assist youth in achieving strengths necessary for traversing development along a healthy pathway. Recreation programs developed in the United States in the 1880s, in part, to provide positive opportunities for children and youth (Witt, 2005). Benefits to recreation program participation have been linked to positive youth development through its relationship with leisure experience (Caldwell & Baldwin, 2003), and by providing opportunities for youth to achieve leisure satisfaction, it might be argued that recreation programs help youth establish certain assets that serve as protective factors for resisting health-risk behaviors in light of research that demonstrates a direct relationship between leisure boredom and tobacco, alcohol, and other drug use (National Center on Addiction and Substance Abuse at Columbia University, 2003).

The purpose of this project is to examine what happens when healthy living curriculum aimed at deterring tobacco, alcohol, and other drug use is implemented within a neighborhood recreation program and how other program experiences might promote the knowledge, skills, and beliefs shown to combat leisure boredom and promote healthy lifestyles. This project also examines quantitative evaluation methodology to identify what differences, if any, exist between the results of the study when a retrospective pretest—posttest survey is utilized versus a traditional pretest—posttest method in order to determine which might be the most appropriate method for measuring participant self-reported changes.
Research Questions

Three questions guided this investigation:

1. Will youth perceive higher levels of knowledge, skills, and potential for positive behaviors after participating in 4-H Health Rocks!® training than they did prior to the training?

2. Will youth perceive higher levels of knowledge, skills, and potential for positive behaviors associated with leisure satisfaction after participating in the recreation program than they did prior to participation?

3. Are traditional pretest—posttest and retrospective pretest—posttest comparisons each valid methods for measuring youth self-reported changes in knowledge, skills, and potential for positive behaviors?
Chapter 2

Literature Review

Tobacco, Alcohol, and Other Drug Use

Tobacco, alcohol, and other drug use among youth have decreased nationwide in recent decades (Centers for Disease Control and Prevention, 2008). While this is a positive trend, recent research provides information that indicates work still needs to be done to reduce youth health-risk behaviors. According to the Centers for Disease Control and Prevention (2008), referring to the thirty-day period prior to participating in a nationwide health-risk survey, 44.7% reported they drank alcohol, 25.7% reported they used tobacco, and 19.7% reported they used marijuana. Early initiation of use is also a concern when considering reports of use by American youth prior to the age of thirteen: 14.2% had used cigarettes, 23.8% had consumed alcohol, and 8.3% had used marijuana (Centers for Disease Control and Prevention, 2008).

Program Approaches

Promotion. In the 1990s, positive youth development came to be affiliated with a set of principles believed to support and enable all young people to thrive (Hamilton, Hamilton, & Pittman, 2004) and that have backed by scholarly evidence (National Research Council and Institute of Medicine, 2002; Pittman, Irby, Tolman, Yohalem, & Ferber, 2002; Scales & Leffert, 1999). Those who subscribe to positive youth development focus on the promotion of individual strengths and the construction of opportunities to help youth develop in healthy ways (National Research Council and Institute of Medicine, 2002). They typically are not concerned with addressing specific problem behaviors and sometimes characterize prevention programming as stereotyping
youth as problems waiting to happen (National Research Council and Institute of Medicine, 2002). Further, Schwartz and colleagues (2010) found that positive youth development protects youth from certain health-risk risk behaviors including tobacco and other drug use, and in this sense, serves in both a prevention and promotion capacity. Several frameworks exist to explain the fundamental principles of positive youth development and most make some mention of “assets” or “developmental assets” (Hamilton et al., 2004). In this context, an asset is a personal or social trait that is desirable alone and can be useful in achieving additional assets or positive outcomes (Hamilton et al., 2004).

**40 Developmental Assets.** The most commonly recognized developmental asset approach is the Search Institute’s 40 Developmental Assets framework (Hamilton et al., 2004). According to research, the more developmental assets young people have, the more likely they are to follow positive developmental pathways and avoid risk behaviors (Scales & Leffert, 1999). Based upon research in youth development, resiliency, and prevention, the Search Institute’s forty assets are divided into two groups: external assets and internal assets (Scales & Leffert, 1999) as detailed in Appendix A. External assets are the structures, relationships and activities that create a positive environment for young people; internal assets suggest the values, skills and beliefs that young people need in order to engage with and function in the world around them (Search Institute, n.d.). Perhaps an appealing factor of the 40 Developmental Assets structure is that each asset can be valued and promoted independently for its own worth, as well as for its association with additional preferred behaviors and conditions (Hamilton et al., 2004).
Recreation and positive leisure experience. While it is not commonly regarded as a framework for positive youth development, leisure has been clearly described as an influential developmental context (Silbereisen, Todt, & Rudinger as cited in Caldwell & Baldwin, 2003) considering “the fact that issues such as the development of autonomy, experimentation with social roles, valuing achievement and identity development are often associated with leisure behavior and the leisure experience” (Caldwell & Baldwin, 2003, p. 184). With regard to substance use, research demonstrates a relationship between leisure boredom and use (National Center on Addiction and Substance Abuse at Columbia University, 2003). In fact, youth who are frequently bored are 50% more likely than youth who are not often bored to smoke, drink, and use other drugs (National Center on Addiction and Substance Abuse at Columbia University, 2003). Within this context, it is important to understand what leisure boredom is and how it might be prevented.

According to Iso-Ahola and Weissinger (1990), leisure boredom is the “mismatch between desired arousal-producing characteristics of leisure experiences, and perceptual or actual availability of such leisure experiences” (pp. 4-5). Youth experiences with leisure depend greatly upon their attitudes and perceptions of activities and opportunities available to them (Gordon & Caltabiano, 1996), but it is generally agreed that boredom results from the perception of too much time with not enough to do, participation in adult-structured activities, or stems from activities that are frustrating or monotonous (Barnett, 2005; Shaw, Caldwell, & Kleiber, 1996). This suggests that youth recreation programs that focus on providing a variety of positive, enriching activities to the developmental benefit of participants might be successful in combating leisure boredom and its associated risks (Iso-Ahola & Crowley, 1991). Therefore, youth-centered
recreation programs that engage young people in these types of activities and construct opportunities to develop strengths and interests promote positive development and have the potential to reduce health-risk behaviors. This protective factor might be gained through recreation programs that meet the following opportunities: leisure education (Barnett, 2005), a safe environment for leisure exploration (Thompson, Rehman, & Humbert, 2005), fun (Perkins, Borden, Villarruel, Carton-Hug, Stone, & Keith, 2007), physical activity (Thompson et al., 2005), and life satisfaction (Park, 2004).

One example of this type of recreation program is a summer day camp program for youth at the City of Lincoln (Nebraska) Parks and Recreation Department’s Irving Recreation Center. At this particular youth recreation program, staff plan and facilitate activities including team games and large group activities, small group and individual pursuits, field trips, swimming, community service, creative activities, clubs, and individual sports (City of Lincoln, 2010). The program’s goals are aimed at the promotion of physical development, social development, skill-building, and leisure education (City of Lincoln, 2010). Recreation program activities take place at the municipal neighborhood recreation center through which participants are enrolled, as well as at various off-site locations throughout the community as scheduled. Formal research has not yet been conducted to evaluate program effectiveness with regard to the promotion of leisure satisfaction and the protective factors with which it is associated.

**Strengths-Based Prevention.** Prevention programs typically focus on precluding a specific problem behavior (National Research Council and Institute of Medicine, 2002). When addressing substance use, information-only programs that merely attempt to teach students about tobacco, alcohol, and other drugs represent a poor approach to reducing
use (Schroeder & Johnson, 2009). While multiple theoretical perspectives and strategies exist to prevent a range of negative outcomes, several prevention theorists argue for a synthesis of prevention and promotion approaches (Weissberg, Kumpfer, & Seligman, 2003), especially for youth. They advocate for programs that integrate strategies for reducing risk and build protective factors (Weissberg et al., 2003). This body of research suggests that efforts to prevent problems for youth should be combined with direct attempts to enhance knowledge, skills, and community involvement (Weissberg et al., 2002). Associated positive outcomes contribute to youth in two ways: they serve as protective factors that reduce risk behavior and as a foundation for healthy development throughout life (Weissberg et al., 2003). The literature suggests that coordinated prevention programming is most effective when, among other things, it utilizes evidence-based prevention curricula along with a protective factor framework that is designed to promote multiple positive outcomes, is age specific, and teaches youth to apply social and emotional skills and values in daily life (Rohrback, Ringwalt, Ennett, & Vincus, 2005; Schroeder & Johnson, 2009; Weissberg et al., 2003).

Despite the research that emphasizes the importance of using evidenced-based prevention curricula, only 42.6% of middle schools in the United States who participated in a nationwide study are using an evidence-based curriculum, and only 23% of respondents overall reported that they used an evidence-based curriculum a majority of the time. More information is needed to understand why more than 75% of middle schools continue to use prevention strategies that have not been shown to be effective (Ringwalt, Vincus, Hanley, Ennet, Bowling, Rohrbach, 2009). This has significance to community programs, including those in the field of recreation, that work with youth to
promote healthy development. It cannot be assumed that young people are receiving adequate prevention training during the school day. This might suggest that the application of this type of training within the context of other community settings, such as youth recreation programs, is critical.

An examination of the literature from the perspectives of both positive youth development and prevention suggests that youth health behaviors might best be addressed through a combined approach. In other words, programs might provide the best developmental service to youth when they are focused on both prevention and the promotion of assets since research suggests that utilizing only one of these approaches does not necessarily influence the other (Phelps, Balsano, Fay, Peltz, Zimmerman, Lerner, & Lerner, 2007). Youth need a variety of opportunities in order to develop in healthy ways. They need programs that recognize and address their individual strengths and focus on assisting them with the acquisition of assets to encourage a healthy developmental path, but they also sometimes need specific direction in avoiding some of the problems and challenges that have been placed in their way (National Research Council and Institute of Medicine, 2002). Conversely, as is often echoed in the field of positive youth development, “problem-free is not fully prepared” (Pittman, 2000, p. 20).

*Health Rocks!*® is one example of curriculum that combines and coordinates promotion and prevention efforts related to substance use. *Health Rocks!*® is a program of the National 4-H Council that is aimed at helping youth develop assets that are correlated with reduced tobacco, alcohol, and other drug use while also specifically helping young people to understand the influences and health consequences of substance use so that they are best equipped to make healthy choices (National 4-H Council, 2009).
Health Rocks!® is still under independent evaluation and there is little published material regarding the effectiveness of the training. However, initial research has found that Health Rocks!® may be effective in helping youth resist peer pressure to smoke even if they are twice as likely to have peers who pressure them to smoke; otherwise, those who have been received Health Rocks!® training have not been found to differ from those who had not with regard to smoking and smoking-related behaviors (Lerner, Lerner, & Phelps, 2009).

A review of the literature tends to support the theory that a combination of healthy living training (i.e., Health Rocks!®) and positive recreation experiences aimed at promoting leisure education and satisfaction (i.e., Irving Recreation Center day camp) might prove influential with regard to improved participant knowledge, skills, behaviors, and protective factors that may help inoculate youth against health-risk behaviors such as tobacco, alcohol, and other drug use.

Survey Methodology

Traditionally, it has not been uncommon for educators in nonformal education programs, researchers, and evaluators to use pretest—posttest surveys to determine whether or not program participants experience changes in knowledge, skills, beliefs, or behaviors resulting from program participation (Raidl et al., 2004; Rockwell & Kohn, 1989; Rohs, 1999). In a traditional pretest—posttest survey design, participants are surveyed at two different times: prior to the program or intervention and after the program or intervention. However, research suggests that in evaluation settings where participants are asked to self-report knowledge and behaviors before and after program experiences, traditional pretest—posttest comparison might inaccurately assess program
impact (Arnold, 2002; Davis, 2003; Pratt, Mcguigan, & Katzev, 2000; Raidl et al., 2004; Rockwell & Kohn, 1989; Rohdes & Jason, 1987; Rohs, 1999). Rockwell and Kohn (1989) attribute this to the fact that “participants may have limited knowledge at the beginning of a program that prevents them from accurately assessing baseline behaviors” (p. 1). The result is what is known as response shift bias. Response shift bias is considered a type of contamination in many self-report measures (Rohs, 1999) and occurs when there is a shift in understanding of the content resulting from program participation. A traditional pretest might then be invalid because participants did not have complete knowledge to accurately respond to the pretest questions. Due to this, participants often overestimate their level of knowledge on a particular subject when using the traditional pretest—posttest method (Pratt, Mcguigan, & Katzev, 2000). The literature suggests that when this type of self-report method used, results show insignificant differences between pretest and posttest responses (Rohs, 1999).

The literature suggests that a retrospective pretest—posttest method can addresses the deficiencies inherent in the traditional pretest method and correct response shift bias (Arnold, 2002; Davis, 2003; Pratt, Mcguigan, & Katzev, 2000; Raidl et al., 2004; Rockwell & Kohn, 1989; Rohdes & Jason, 1987; Rohs, 1999). In the retrospective pretest—posttest method, participants are not administered a pretest at the beginning of the program. Instead, participants respond to two questions or statements from the same point of reference at the end of the program: one in response to knowledge, skills, or behaviors resulting from the program and the other about their knowledge, skills, or behaviors prior to the program. At the end of the program, their new understanding of program content impacts their self-assessment (Rockwell & Kohn, 1989). Rohs (1999)
makes the claim that no study comparing traditional pretest—posttest and retrospective pretest—posttest methods has resulted in the traditional pretest method offering a more accurate or even equivalent result to the retrospective pretest—posttest approach to represent change in behavior.

Rhodes and Jason (1987) describe an example of how response shift bias can influence the results of a life-skills substance abuse prevention program evaluation and how quantitative data collection choices must be carefully considered. The researchers used two survey methods: traditional pretest—posttest and retrospective pretest—posttest questionnaires to assess participant behaviors before and after the program. Rhodes and Jason (1987) reported that traditional pretest—posttest results indicated significant increases in tobacco usage while the retrospective pretest—posttest results demonstrated no significant change in use. They concluded that researchers should continue to use and research the retrospective pretest—posttest method, especially when studying youth tobacco use.
Chapter 3

Methods

A mixed method design for evaluation was used in order to answer the questions under examination in this study: 1) will youth perceive higher levels of knowledge, skills, and potential for positive behaviors after participating in 4-H Health Rocks!® training than they did prior to the training, 2) will youth perceive higher levels of knowledge, skills, and potential for positive behaviors associated with leisure satisfaction after participating in the recreation program than they did prior to participation, and (3) are traditional pretest—posttest and retrospective pretest—posttest comparisons each valid methods for measuring youth self-reported changes in knowledge, skills, and potential for positive behaviors? Interest in mixed methods has increased recently as demonstrated in scholarly work within a variety of disciplines (Creswell, 2009). This design combines both quantitative and qualitative approaches to research and mixes both within the study (Creswell, 2009). It is more than just gathering and analyzing both types of data; mixed methods research utilizes both approaches together and takes advantage of the strengths of each in order to provide opportunity for a more thorough and comprehensive analysis of the data (Creswell, 2009).

This project utilized a mixed methods triangulation design wherein both quantitative and qualitative data were collected, qualitative data were transformed into an additional quantitative dataset, and each set of data (quantitative, qualitative, and transformed qualitative data) was compared and contrasted with the others as illustrated in Figure 1. Specifically, survey data were connected with qualitative interview data on common themes related to the research questions. The quantified interview data were
also compared with the primary quantitative data to allow for a more direct comparison of each respective dataset. The transformed data are not intended to be merged with the quantitative data from the survey instruments; rather, each dataset was used side-by-side so one may confirm or disconfirm the other.

Prior to evaluation activities, the project received approval from the University of Nebraska Institutional Review Board (IRB) (see Appendix B). IRB criteria included: project title, investigator information and contact information, student status, type of research, source of funding, start and completion dates, description of subjects and characteristics, type of participants (19 years and under), description of significance of the project, methods and procedures, subject recruitment, descriptions of risk and benefits, compensation, confidentiality, informed consent (see Appendix E), informed assent (see Appendix F), institutional approval letter (see Appendix G), and copies of all instruments (see Appendix I).
Participants and Sample

All participants enrolled in the recreation program for middle school students were recruited for participation in the quantitative portion of this study. The program enrolled approximately forty-five youth per week, which was its maximum capacity due to budget and child care licensing considerations. Not all participants enrolled in every week of the program, and a total of approximately fifty-five different youth were served throughout the entire program. Families pre-registered on a weekly basis, and approximately fifteen youth received no Health Rocks!® training as a result of their attendance patterns. Of the remaining youth who completed the training, twenty-seven agreed to participate in the research project. Twenty youth fulfilled their responsibilities as participants in the study by submitting all of the evaluation tools. Of these twenty participants, ten were randomly selected to participate in the qualitative portion of the study. According to Creswell and Plano Clark (2007), it is beneficial to collect data from only a few individuals in the qualitative portion of a mixed methods project because “more individuals participating in a study means that the researcher will obtain less depth from each participant” (p. 30). On the other hand, quantitative data benefits from larger sample sizes.

Any young person who was entering middle school (grades 6—8) in the following academic year was eligible to enroll. The program was open to youth of any race, ethnicity, gender, or any other cultural groups. While the program was fee-based, efforts were made to remove financial barriers to participation through subsidies including sliding fees, scholarships, and Title XX Social Services block grant funds for child care assistance. All youth enrolled in the summer recreation program received intermediate
level Health Rocks!® training, but only those youth who assented and whose parents consented participated in the evaluation project.

Table 1 provides a detailed description of participants’ demographic information as self-reported on the Participant Intake Survey. Of twenty participants completing the research evaluation project, eight were female and twelve were male. Twelve were eleven years-old, six were twelve years-old, and two were thirteen years-old. A slight majority of participants (n = 11) reported they would enter seventh grade following the summer program. The most commonly reported racial identities were Caucasian (n = 11) and Multi-Racial (n = 6). In addition, one responded as African-American/Black, one unknown, and one did not respond to the question. Four participants reported being of Hispanic/Latino ethnicity, fourteen indicated they were not Hispanic/Latino, and two left the question unanswered.

Table 1
Survey Participant Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (Total N = 20)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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</tr>
<tr>
<td>Female</td>
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<td>40.0</td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>60.0</td>
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<td>11</td>
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<tr>
<td>8</td>
<td>3</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Race
- Caucasian: 11 (55.0)
- African American/Black: 1 (5.0)
- Multi-Racial: 6 (30.0)
- Unknown: 1 (5.0)
- Missing: 1 (5.0)

Ethnicity
- Hispanic/Latino: 4 (20.0)
- Not Hispanic Latino: 14 (70.0)
- Missing: 2 (10.0)

Power analysis is useful to estimate sufficient sample size (Cohen, 1988). Since obtaining a large sample size for this community program was not feasible, this power analysis was used to provide further information and to address the concern about the effect size. With alpha=.05 and power=.80, the required sample size was 15 for a two-tail test.

**Procedures**

Evaluation data were collected at two times: at program intake, prior to participation in *Health Rocks!*® training and youth recreation program activities, and after participation when each participant exits the youth recreation program.

The recreation summer day camp program operated five days per week for ten weeks during the summer. The core program day was seven and one-half hours long and participants engaged in a variety of recreation opportunities for interest exploration and skill building. While there was not a single youth recreation program curriculum, the
program utilized a variety of curricula and activity resources including, but not limited to, game playing, service learning, angling, creative arts, team and individual sports, environmental stewardship, yoga, and so forth. The program logic model includes curriculum and activity details and is located in Appendix J.

*Health Rocks®*! training was conducted within the recreation program as a regular component of weekly activities. The curriculum was delivered in eight modules over the course of four weeks: Keeping Healthy, Self-Awareness: Me and My Stress, It’s My Choice!, Who Says It’s Normal, Learning the Skills, Media and Technology Messages, Stepping Up to Help, and Communicating Healthy Messages (National 4-H Council, 2009). Each module included at least two 30-45 minute activities.

Utilizing “Teens as Volunteer Leaders,” an established model for including young people in teaching and providing programs to youth (National 4-H Council, 2009), the principal investigator and one nineteen-year-old AmeriCorps Member conducted the training as partners. As a co-facilitator, the principal investigator was required to manage risks associated with conflicts of interest as an internal evaluator. This role mirrors the reality often faced by practitioners as evaluators in community-based nonformal education programs. It is typical for a qualitative investigator to often be involved in the experience with participants (Creswell, 2009), and one benefit of this type of participation might be a better understanding of the setting and program experience. However, potential bias is also inherent. It is important to note that the principal investigator of this study was employed by the organization with direct responsibility for managing program operations at the research site. Glesne and Peshkin (1992) refer to this type of scenario as “backyard” research. The principal investigator had interpersonal
relationships with program staff, participants, and families and a significant interest in the success of the program. Due to the natural risks associated with “backyard” research, sampling methods and triangulation of results were intentionally employed to offset potential bias from an internal evaluator with connections to participants and the research site, but the risks of such bias must be recognized.

**Instruments**

Three instruments were used to collect data in order to examine perceived effects of healthy living training in the youth recreation program: traditional pretest survey, retrospective pretest-posttest survey, and an open-ended interview script. These instruments are available in Appendix I. Both traditional and retrospective pretests were utilized with the intention of allowing qualitative data to assist with understanding any discrepancies between results using different pretest measures, and in the case of such inconsistencies, to understand which pretest—posttest comparison is most likely to be confirmed by the qualitative dataset. These understandings might suggest implications for practice and future research.

The quantitative surveys assessed five areas of strengths: knowledge, attitudes and beliefs, skills, general assets, and leisure experience. Participants were asked to rate their agreement with thirty-nine statements on a four-point Likert-scale (strongly disagree to strongly agree). Seven additional questions asked demographic questions. The surveys took approximately 15-20 minutes to complete. These instruments were based upon the *Health Rocks!*® Evaluation Survey used by national 4-H programs in 10 states and validated with over 12,000 youth. The Chronbach *alpha* for the four subscales on the national *Health Rocks!*® Evaluation Survey are .78 for knowledge, .65 for skills, .81 for
attitudes/beliefs, and .87 for assets respectively. Confirmatory Factor Analysis (CFA) using the national data shows that the CFA model fits the data well (CFI = .95, TLI = .94, RMSEA = .035 and 90% C.I. = .033 -.036).

The traditional pretest was administered at intake. Prior to exiting the program, the retrospective pretest and posttest survey was completed by participants regarding any perceived change that took place as a result of program participation by asking questions regarding knowledge, attitudes, skill and/or behaviors upon completion of the training and then asking participants to report what their knowledge, attitudes, skills and/or behaviors were previously.

Additionally, one-on-one detailed interviews were conducted by the principle investigator with ten randomly selected participants. The Microsoft Excel 2010 “RANDBETWEEN” function was used to generate random numbers corresponding to the complete set of participant identification numbers. Each time a number was returned, it was matched with the research participant assigned to that number. If the participant completed the quantitative portion of the study, they were selected for an interview. If the corresponding participant did not complete the quantitative portion of the study, the number was discarded and a new number was generated. This process continued until ten research participants were randomly selected to participate in one-on-one interviews. Interviews were conducted in a meeting room at the neighborhood recreation center during the regular program day. Participants were asked open-ended questions designed to generate the most detailed response possible. Four questions were prepared to specifically elicit response regarding Health Rocks!® training and four questions asked about other recreation experiences in the program. Member checking was employed to
help ensure internal validity. Each interview was scheduled to last 30 minutes. The interview script is available in Appendix I. Audio recordings of the interviews were transcribed by the principle investigator.

**Data Analysis**

**Quantitative data.** Responses to survey items were analyzed using descriptive statistics including frequencies and mean ratings for survey items relating to both *Health Rocks!®* training and other recreation program activities. PASW Statistics 18 (formerly SPSS) was used to analyze quantitative data. Program effects as perceived by participants were analyzed by using paired t-tests to compare mean scores on traditional pretest items assessed at intake with mean scores on the corresponding posttest items and to compare retrospective pretest scores with the corresponding posttest scores. To better understand the occurrence of any discrepancies between the different pretest measures, paired t-tests were also used to compare mean item scores on traditional pretest items with mean item scores on retrospective pretest items.

**Qualitative data.** Qualitative data analysis was performed using a systematic text analysis of open-ended interview responses transcribed by the principal investigator. MAXQDA qualitative text analysis software was used to analyze the data after multiple initial readings of the text. Data were first analyzed according to predetermined codes: knowledge, skills, attitudes and beliefs, general assets, and leisure and life satisfaction. These predetermined codes were used to insure alignment with the research questions. The qualitative data were then quantified to describe the number of participants who reported positive change, no change, and negative change in each of the categories. After further analysis, multiple categories emerged to demonstrate change in knowledge, skills,
and potential for positive behavior. These categories were further examined in an additional stage of analysis to allow specific themes to arise.

**Connecting the data.** Qualitative data were initially quantified by the number of interview participants whose responses suggested negative change, no change, or positive change in knowledge, skills, attitudes and beliefs, general assets, and leisure and life satisfaction. The transformed data is not intended to be merged with the quantitative data from the survey instruments; rather, each dataset is used side-by-side so one may confirm or disconfirm the other. Descriptive quotations also played a supporting role in the comparison of qualitative and quantitative data. Connecting data was intended to provide opportunity for a more thorough and comprehensive analysis as suggested by Creswell (2009). This process of triangulation also adds validity to the study when common themes are supported by multiple sources of data and participant perspectives (Creswell, 2009).
Chapter 4

Results

Results of data analysis are presented in three sections representing the mixed methods triangulation design of the study with data transformation: quantitative results comparing scores on the traditional pretest, retrospective pretest, and posttest are followed by qualitative results gathered from data collected during one-on-one interviews with a randomly selected sample of participants, and transformed (quantified) qualitative data. Quantitative and qualitative results are then compared side-by-side to aid in the interpretation of results. The questions under investigation are reiterated here to assist in providing focus to the examination of results.

Research Questions

1. Will youth perceive higher levels of knowledge, skills, and potential for positive behaviors after participating in 4-H Health Rocks!® training than they did prior to the training?

2. Will youth perceive higher levels of knowledge, skills, and potential for positive behaviors associated with leisure satisfaction after participating in the recreation program than they did prior to participation?

3. Are traditional pretest—posttest and retrospective pretest—posttest comparisons each valid methods for measuring participant self-reported change in knowledge, skills, and potential for positive behaviors?

Quantitative Results

Results of Paired T-tests. Repeated measure t-tests were utilized to investigate the research questions. The mean score on each scale (i.e., knowledge, attitudes and
beliefs, skills, general assets, and leisure) is reported in Table 2 for each survey method: traditional pretest, retrospective pretest, and posttest. Table 3 illustrates the results of three paired t-tests on each scale: traditional pretest and posttest (Pair 1), retrospective pretest and posttest (Pair 2), and traditional pretest and retrospective pretest (Pair 3).

Table 2

Summary of Quantitative Results: Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>N</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional Pretest</td>
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<tr>
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<td>Traditional Pretest</td>
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<td>Retrospective Pretest</td>
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<tr>
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<td>Retrospective Pretest</td>
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</tr>
<tr>
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<td>Traditional Pretest</td>
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<td>Posttest</td>
<td>3.3289</td>
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<td>.64059</td>
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Table 3

Summary of Quantitative Results: Paired Samples Test

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>LL</th>
<th>UL</th>
<th>t</th>
<th>df</th>
<th>p</th>
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<td><strong>Knowledge</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
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<td>.06961</td>
<td>-.769</td>
<td>19</td>
<td>.443</td>
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<tr>
<td>Pair 2</td>
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<td>.69894</td>
<td>-.04725</td>
<td>.15836</td>
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<td>19</td>
<td>.288</td>
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<tr>
<td>Pair 3</td>
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<td>.79172</td>
<td>-.21645</td>
<td>.01645</td>
<td>-1.695</td>
<td>19</td>
<td>.092</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
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<td>.381</td>
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<tr>
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<td>19</td>
<td>.002**</td>
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<tr>
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<td>-.30172</td>
<td>-.05874</td>
<td>-2.928</td>
<td>19</td>
<td>.004**</td>
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<td></td>
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<td>-.20748</td>
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<td>.012*</td>
</tr>
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<td>-.28868</td>
<td>-.07603</td>
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<td>19</td>
<td>.001***</td>
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<td><strong>General assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
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<td>.62783</td>
<td>-.19930</td>
<td>.00193</td>
<td>-1.938</td>
<td>19</td>
<td>.055</td>
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<tr>
<td>Pair 2</td>
<td>.13158</td>
<td>.39339</td>
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<td>19</td>
<td>.000***</td>
</tr>
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<td>Pair 3</td>
<td>-.23026</td>
<td>.65580</td>
<td>-.33536</td>
<td>-.12517</td>
<td>-4.329</td>
<td>19</td>
<td>.000***</td>
</tr>
<tr>
<td><strong>Leisure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
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<td>.70425</td>
<td>.11539</td>
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<td>19</td>
<td>.001***</td>
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<tr>
<td>Pair 2</td>
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<td>.56949</td>
<td>.06897</td>
<td>.33103</td>
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<td>19</td>
<td>.003**</td>
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<td>.77692</td>
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<td>.743</td>
<td>19</td>
<td>.460</td>
</tr>
</tbody>
</table>

Note. Pair 1 = traditional pretest and posttest; Pair 2 = retrospective pretest and posttest; Pair 3 = traditional and retrospective pretests.

*p < .05, **p < .01, ***p < .001 (two-tailed).

**Knowledge.** Both the traditional pretest—posttest comparison ($M = -.044, SD = .775$), $t(19) = -.769, p \geq .05$ (two-tailed) and the retrospective pretest—posttest
comparison ($M = -.056, SD = .699$), $t(19) = 1.066, p \geq .05$ (two-tailed) yielded no significant change in participant knowledge. This was also the case for each of the individual survey items that address knowledge.

**Skills.** Significant change was found in both the traditional pretest—posttest and the retrospective pretest—posttest measures of the level of participant self-reported skills; however, with different results. The results of the traditional pretest—posttest ($M = -\cdot106, SD = .671$), $t(19) = -2.057, p \leq .05$ (two-tailed) comparison suggests a general decrease in participant skill level while the results of the retrospective pretest—posttest ($M = .076, SD = .391$), $t(19) = 2.541, p \leq .05$ (two-tailed) comparison suggests a slight, statistically significant increase in self-reported skill level.

The individual skills-related items from the survey that demonstrated positive change in the results of the retrospective pretest—posttest comparison include “If a friend wanted to try drugs, I can talk them out of it,” “I am able to choose healthy behaviors to deal with stress,” and “I am able to tell when TV or other kinds of ads influence my decisions” as shown in Table 4. One item from the traditional pretest—posttest comparison resulted in a statistically significant decrease in skills: “I can gather information before making decisions” ($M = .421, SD = .607$), $t(18) = 3.024, p \leq .05$ (two-tailed).

Table 4

*Quantitative Examples of Change in Skills*

<table>
<thead>
<tr>
<th></th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td></td>
<td>$LL$</td>
</tr>
</tbody>
</table>


If a friend wanted me to try drugs, I can talk them out of it.\(^b\)

<table>
<thead>
<tr>
<th>Attitude/Belief</th>
<th>(M)</th>
<th>(SD)</th>
<th>(95% CI)</th>
<th>(t)</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>If one of my friends was using drugs, I should tell them to stop</td>
<td>(.21053)</td>
<td>(.41885)</td>
<td>(.00865)</td>
<td>(.41241)</td>
<td>(2.191)</td>
</tr>
<tr>
<td>Trying drugs just once is not a big deal</td>
<td>(.26316)</td>
<td>(.45241)</td>
<td>(.04510)</td>
<td>(.48121)</td>
<td>(2.535)</td>
</tr>
</tbody>
</table>

\(^a df = 18. \(^b\) retrospective pretest—posttest comparison. \(^c\) traditional pretest—posttest comparison. \(^* p < .05, ** p < .01\) (two-tailed).

**Attitudes/beliefs.** Results of the traditional pretest—posttest comparison were not statistically significant (\(M = -.05233, SD = .78184\)), \(t(19) = -.878, p \geq .05\) (two-tailed).

Contrastingly, retrospective pretest—posttest comparison results showed a statistically significant increase in scores measuring attitude and beliefs (\(M = .12644, SD = .53338\)), \(t(19) = 3.127, p \leq .05\) (two-tailed).

Of the individual survey items that address attitudes and beliefs, two resulted in significant change when the retrospective pretest is compared to the posttest: “If one of my friends was using drugs, I should tell them to stop” and “Trying drugs just once is not a big deal” as detailed in Table 5.

Table 5

**Quantitative Examples of Change in Attitudes/Beliefs**

<table>
<thead>
<tr>
<th>(M)</th>
<th>(SD)</th>
<th>(95% CI)</th>
<th>(t)</th>
<th>(P)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(LL)</td>
<td>(UL)</td>
<td></td>
</tr>
</tbody>
</table>


If one of my friends was using drugs, I should tell them to stop.

Trying drugs just once [is] a big deal.\(^a\)

\(^a\)\(^b\)The wording of this item was rewritten from the original “Trying drugs just once is not a big deal” during data analysis and individual participant scores were inverted respectively at that time to enable this measure to agree with the language of other survey items for comparison.

\(^*\)p < .05 (two-tailed).

**General assets.** As with attitudes and beliefs, the results of the traditional pretest—posttest comparison were not statistically significant (\(M = -.09868, SD = .62783\)), \(t(19) = -1.938, p \geq .05\) (two-tailed); however, one specific traditional pretest—posttest item alone did result in a significant decrease: “I would help other kids like me to stay away from alcohol or other drugs” (\(M = -.57895, SD = .83771\)), \(t(18) = -3.012, p \leq .05\) (two-tailed). The retrospective pretest—posttest measure of this item was not statistically significant (\(M = .15789, SD = .50146\)), \(t(18) = 1.372, p \geq .05\) (two-tailed).

Retrospective pretest—posttest comparison results showed a statistically significant increase in general assets (\(M = .13158, SD = .39339\)), \(t(19) = 4.124, p \leq .05\) (two-tailed). One specific item in this category stood out as being statistically significant on its own: “I can achieve most of the goals I have for myself” (\(M = .26316, SD = .45241\)), \(t(18) = .2535, p \leq .05\) (two-tailed).

**Leisure and life satisfaction.** Overall, results of the leisure and life satisfaction category demonstrated significant increases on both the traditional pretest—posttest (\(M = .27632, SD = .70425\)), \(t(19) = 3.420, p \leq .05\) (two-tailed) and retrospective pretest—posttest (\(M = .20000, SD = .56949\)), \(t(19) = 3.074, p \leq .05\) (two-tailed) comparisons. The
difference between the traditional pretest and the retrospective pretest results for this measure were statistically insignificant \((M = .067, SD = .777), t(19) = .743, p \geq .05\) (two-tailed).

As indicated in Table 6, two individual items were found to be statistically significant when the traditional pretest and posttest were compared: “Most of the time I am not bored” and “I am happy with my life.” Also indicated in Table 6, “Most of the time I am not bored” was found to be statistically significant on its own when the retrospective pretest and posttest were compared.

Table 6

**Quantitative Examples of Change in Leisure and Life Satisfaction**

<table>
<thead>
<tr>
<th>M</th>
<th>SD</th>
<th>LL</th>
<th>UL</th>
<th>T</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most of the time I am not bored. (^a)</td>
<td>.57895</td>
<td>.83771</td>
<td>.17519</td>
<td>.98271</td>
<td>3.012</td>
<td>18</td>
</tr>
<tr>
<td>I am happy with my life. (^a)</td>
<td>.21053</td>
<td>.41885</td>
<td>.00865</td>
<td>.41241</td>
<td>2.191</td>
<td>18</td>
</tr>
<tr>
<td>Most of the time I am not bored. (^b)</td>
<td>.44444</td>
<td>.51131</td>
<td>.19018</td>
<td>.69871</td>
<td>3.688</td>
<td>17</td>
</tr>
</tbody>
</table>

\(^a\)traditional pretest and posttest. \(^b\)retrospective pretest and posttest.  
*\(p < .05\), **\(p < .01\) (two-tailed).

**Traditional pretest versus retrospective pretest (Pair 3).** Results indicate that combined traditional pretest scores \((M = 3.35, SD = .716)\) were less statistically significantly than the overall retrospective pretest scores \((M = 3.21, SD = .788), t(19) = 5.352, p = .000, \) (two-tailed). When examining the quantitative data collected during this study, it is important to understand and differentiate between these two sets of
information. The overall mean difference ($M = .147, SD = .751$) causes a seemingly significant variation in how the results might be interpreted. In general, the retrospective pretest—posttest comparison yielded a consistently positive change (i.e., the posttest mean was higher than the pretest mean) on each measure while the traditional pretest—posttest comparison resulted in either no change or negative change on all but one measure (viz., leisure and life satisfaction). The practical implications of the different results using two separate pretest procedures and scores will be considered in detail in the Discussion.

While there was no significant difference between the traditional pretest and retrospective pretest on knowledge ($M = -.100, SD = .792$), $t(19) = -1.695, p \geq .05$ (two-tailed) and leisure ($M = .067, SD = .777$), $t(19) = .743, p \geq .05$ (two-tailed), a statistically significant difference between each pretest method was evident on the remaining scales: skills ($M = -.182, SD = .702$), $t(19) = -3.386, p \leq .05$ (two-tailed), attitudes and beliefs ($M = -.180, SD = .807$), $t(19) = -2.928, p \leq .05$ (two-tailed), and general assets ($M = -.230, SD = .656$), $t(19) = -4.329, p \leq .05$ (two-tailed).

**Qualitative Results**

Ten youth who participated in the quantitative portion of the project were randomly selected to participate in one-one-one interviews. Demographic descriptions of the interview participants are detailed in Table 7. Participants were asked open-ended questions designed to elicit as much detail as possible: four questions regarding *Health Rocks!*® training specifically and four questions about other recreation experiences in the program. Interview responses were audio-recorded and then transcribed verbatim by the
primary investigator. Each interview was assigned an identification number and sorted by number.

After multiple thorough readings of each transcript, the data were first analyzed according to predetermined codes: knowledge, skills, attitudes and beliefs, general assets, and leisure and life satisfaction. These predetermined codes were used to insure alignment with the research questions. The qualitative data were then quantified to describe the number of participants who reported positive change, no change, and negative change in each of the categories. After further analysis of the text that grouped data by topic, multiple categories emerged to represent what change, if any, participants perceived in knowledge, skills, and potential for positive behavior. These categories were further examined in an additional stage of analysis which prompted specific themes to arise as to how program activities appear to have impacted participants.

Table 7

*Interview Participant Demographics*

<table>
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<tr>
<th>Variable</th>
<th>% (N = 10)</th>
</tr>
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<tbody>
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<tr>
<td>Female</td>
<td>40.0</td>
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<tr>
<td>Male</td>
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<tr>
<td>6</td>
<td>30.0</td>
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</table>
Data transformation. Qualitative data were first categorized according to predetermined codes in order to quantify the number of interview participants whose responses suggest negative change, no change, or positive change in knowledge, skills, attitudes and beliefs, general assets, and leisure and life satisfaction. Table 8 summarizes these results.

Table 8

Summary of Data Transformation Results: Quantifying Qualitative Data

<table>
<thead>
<tr>
<th></th>
<th>Negative Change(^a)</th>
<th>No Change(^a)</th>
<th>Positive Change(^a)</th>
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</thead>
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<tr>
<td>Knowledge</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Skills</td>
<td>0.0</td>
<td>30.0</td>
<td>70.0</td>
</tr>
<tr>
<td>Attitudes and beliefs</td>
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<td>60.0</td>
<td>40.0</td>
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<tr>
<td>General assets</td>
<td>0.0</td>
<td>20.0</td>
<td>80.0</td>
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</table>
Knowledge. Coded interviews found significant evidence of increased knowledge. Each of the randomly-selected participants for the qualitative portion of the study described some degree of increased knowledge; therefore, data was not available to support a lack of change in knowledge or decreased levels of knowledge. Examples of increased knowledge are illustrated in Table 9.

Skills. Analysis of qualitative data resulted in evidence of increased levels of skill for seven of the ten participants randomly selected for interview the interview portion of the study. Supporting data for skill development can be found in Table 9. The remaining three participants who were interviewed described no change. There was no implication of decreased levels of skill uncovered among the coded interview data.

Attitudes/beliefs. The qualitative data as it relates to attitudes and beliefs results in a close number of participants who indicate improved attitudes and beliefs (n = 6) and those who describe no change in this category (n = 4). Tables 9 and 10 provide examples of each. There is no data available that would result in a finding that any of the participants experienced diminished attitudes or beliefs regarding tobacco, alcohol, and other drugs.

General assets. Qualitative results in the category of general assets are based upon data collected from participant interviews that reflect a potential for positive behaviors, and text coded for this category includes some overlap with that which has been reported in other categories, specifically skills, attitudes and beliefs, and leisure skills and life satisfaction. In general, eight of the ten participants who participated in
one-on-one interviews demonstrated some degree of increased level of general assets. When coded for general assets, none of the interviews specifically addressed no change or decreased level of general assets. For the purposes of quantifying the data, the two participants who did not demonstrate increased change are counted as having no change in levels of general assets.

Leisure and life satisfaction. As with the category of knowledge, coded interviews found significant evidence of increased levels of leisure skills. Each of the randomly-selected participants for the qualitative portion of the study described some degree of improved leisure skill (see examples in Table 9); therefore, data was not available to support a lack of change in knowledge or decreased levels of knowledge.

Emergent categories. After the initial coding process and quantification of qualitative data according to predetermined codes that were directly related to the questions under research, further analysis allowed seven specific categories to emerge. Coded data were organized by clustering similar data according to topics and each topic was named with the most descriptive wording to characterize each category. These categories represent the types of change participants experienced as the result of participation in Health Rocks!® and recreation program activities: Rates of Use, Causes and Effects of Use, Helping Others, Active and Passive Resistance Strategies, Leisure Education and Skill Development, Fun, and Safety. Table 9 lists these categories and highlights examples of supporting interview responses.

Table 9

Qualitative Categories and Supporting Data

<table>
<thead>
<tr>
<th>Category</th>
<th>ID No.</th>
<th>Supporting Data</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>Rates of Use</th>
<th>3</th>
<th>“…less people tried alcohol than I thought would…and…people that tried smoking was less than I thought it would be.”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>“I thought there would be quite a few more [youth who used drugs]…”</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>“I thought there were a lot more [youth] that smoked.”</td>
</tr>
<tr>
<td>Causes &amp; Effects of Use</td>
<td>1</td>
<td>“…it helped me learn more about what drugs and alcohol can do to you [and] what makes people do drugs and alcohol.”</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>“I didn’t know how much [drugs] could hurt you and everything.”</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>“It makes me feel more secure of knowing what they really are, and more knowledgeable so if you ever think about trying those you can know what the bad things it has inside them and what they’re made of, and what they can do to you, and how they can treat your body and your brain, and how you think…”</td>
</tr>
<tr>
<td>Helping Others</td>
<td>1</td>
<td>“Well I know some of my family members, they do it, and after Health Rocks!® I thought really hard about it, and now I’m building up the courage to tell them to stop.”</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>“I would try to persuade them not to do it and tell them what it could do to them, and how it could affect their future.”</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>“I would try to convince [my friend] to stop. I’ll like maybe take them to a computer and show them on the computer what happens when you do the drug.”</td>
</tr>
<tr>
<td>Active and Passive Resistance Strategies</td>
<td>1</td>
<td>“If I’m ever faced with it, I would say, just to make them think that you would do it, yeah, maybe later, but I have to go do something real quick. And then the next day at school when they see you, you could say, ‘I’m too tired. I’m not feeling it.’”</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>“If they asked me to do it, I would constantly keep telling them no and if they start doing that I just probably wouldn’t be their friend anymore.”</td>
</tr>
</tbody>
</table>
“I’ll probably think back to Health Rocks!® and…all the stuff and the facts...we talked about, and if I’m ever faced with any of that stuff, I’ll know how to say “no” because we talked about that.

“[Staff name] helped us learn how to play soccer…well, actually, how to get better I guess.”

“I probably will [play tennis in the future]. I’ve asked my mom a couple of times. After I get another racket I can.”

“Yeah, like archery, with that it made me think…it’s really a learning experience to learn how to do new things. They have all new things here like archery and cooking, and the Art Van came, and if you want to learn about art you can do that.”

“…instead of being at home doing nothing, like watching TV, you can actually be active like have more fun than you would at home.”

“It’s really fun because last year I went to a day care, and this is a whole lot more fun. Because we didn’t really participate in anything, and there’s just a whole bunch of little kids and we had to just sometimes watch them.”

“…they just have you going all the time with all fun stuff. It’s not ever boring because you always have something to do.”

“I like all that stuff so instead of being at home playing video games or getting into trouble, I have a place to come and I know I’ll be safe and no one will ask me, ‘Hey, do you want to do drugs?’ or anything.”

“…the leaders here, they make you feel safe and stuff.”

While qualitative data does not suggest a decrease in knowledge, skills, and potential for positive behaviors, one additional theme did emerge that explains a lack of positive change for some participants: Previous Attainment. In general, participants who described no change in proficiencies or potential for positive behavior consistently
echoed the same idea: they had attained certain positive attributes prior to *Health Rocks!*® and recreation program activities. See Table 10 for examples.

Table 10

*Previous Attainment: Qualitative Description of No Change*

<table>
<thead>
<tr>
<th>ID No.</th>
<th>Supporting Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>“Not really. I always really knew about drugs and everything.”</td>
</tr>
<tr>
<td>20</td>
<td>“Well, it sort of kept it the same…I really wasn’t going to do drugs anyway.”</td>
</tr>
<tr>
<td>24</td>
<td>“Not that much, really. I guess it’s—I mean, I already know I shouldn’t use them, and with prescriptions and over-the-counter, I should know how to use them safely.”</td>
</tr>
</tbody>
</table>

In some cases, interview participants responded that while *Health Rocks!*® and recreation program activities did not lead to an increase in knowledge, skills, attitudes and beliefs, general assets, or leisure and life satisfaction, *Health Rocks!*® and recreation program activities did reinforce the competencies and potential for positive behaviors reported having been previously attained elsewhere. For example, Participant #26 discussed leadership skills attained through participation in other youth programs but also how recreation program activities provided opportunities to practice and reinforce those skills. As Participant #6 explained, “Well, my mom tells me about some of that stuff. School tells me about most of it; they talked all about what smoking and tobacco and alcohol can do to you, they showed pictures, and that’s mostly what got me into not doing it…[After *Health Rocks!*®] it stayed the same… [*Health Rocks!*®] told me not to do it—it reminded me.”
**Themes.** In the last stage of analysis, four themes appeared to emerge from the data and help to define the change that might be attributed to training within the program:

1. Increased knowledge about rates, causes, and consequences of tobacco, alcohol, and other drug use empowers youth to keep themselves, their family, and their friends from using.

2. After participating in program activities, youth may use both active and passive resistance strategies to deal with negative peer pressure and avoid use of tobacco, alcohol, and other drugs.

3. Participation in program activities reinforces the knowledge, skills, and potential for positive behaviors youth report having previously attained elsewhere.

4. Participation in program activities contributes to leisure satisfaction through fun and engaging recreation opportunities that provide positive introductions to lifelong leisure skills.

Table 11

*Theme Development*

<table>
<thead>
<tr>
<th>No.</th>
<th>Theme</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increased knowledge about rates, causes, and consequences of tobacco, alcohol, and other drug use empowers youth to keep themselves, their family and friends from using.</td>
<td>Rates of Use, Causes &amp; Effects of Use, Helping Others</td>
</tr>
<tr>
<td>2</td>
<td>After participating in program activities, youth may use both active and passive resistance strategies to deal with negative</td>
<td>Active &amp; Passive Resistance</td>
</tr>
</tbody>
</table>
Comparing the Data

Knowledge. Quantitative results suggest that youth perceive no change in knowledge resulting from *Health Rocks!*® and recreation program activities; however, qualitative results of the study disconfirm this finding. In fact, detailed analysis of each interview indicated increased knowledge. Specifically, qualitative results suggest that increased knowledge about rates, causes, and consequences of tobacco, alcohol, and other drug use empowers youth to keep themselves, their family and friends from using tobacco, alcohol, and other drugs.

Skills. Qualitative results support the finding of the retrospective pretest—posttest comparison that youth experience increased level of skills associated with avoiding tobacco, alcohol, and other drug use after participation in *Health Rocks!*®. A theme evolved from the qualitative data that highlights the development of skills used to resist negative peer pressure to use tobacco, alcohol, and other drugs. It is important to note that results of the traditional pretest—posttest comparison disagree with these
findings. These results suggest a general decrease in participant skill level \((M = -.106, SD = .671)\), \(t(19) = -2.057, p \leq .05\) (two-tailed).

**Attitudes/beliefs.** The majority (70%) of participants in the qualitative portion of the study indicated no change in attitudes/beliefs. This supports the overall finding from the comparison of traditional pretest—posttest results on this measure. However, both are in disagreement with retrospective pretest—posttest results that indicate slight overall improvement in attitudes/beliefs \((M = .12644, SD = .53338)\), \(t(19) = 3.127, p \leq .05\) (two-tailed). This is the only case in this study when results of the traditional pretest—posttest comparison disagreed with the retrospective pretest—posttest comparison and the qualitative data did not confirm the results of the retrospective pretest—posttest.

**General assets.** Qualitative results support the finding of the retrospective pretest—posttest comparison that youth experience an increase in general assets associated with avoiding tobacco, alcohol, and other drug use after participation in Health Rocks!®. The traditional pretest—posttest comparison results in statistically insignificant change.

**Leisure satisfaction.** When results of the traditional pretest—posttest comparison, retrospective pretest—posttest comparison, and interviews are all compared side-by-side, it becomes irrefutably clear that youth perceive increased leisure skills and leisure satisfaction. This is important because previous research has provided evidence for leisure satisfaction as a protective factor against tobacco, alcohol, and other drug use (National Center on Addiction and Substance Abuse at Columbia University, 2003).

**Explaining lack of change.** Qualitative data provides a possible explanation for perceived lack of change reported by youth. In each qualitative case of no increase in
knowledge, skills, and potential for positive behaviors, participation in program activities
reinforced previous attainment of these strengths.

Negative effects. Qualitative results disconfirm traditional pretest—posttest
cases that seem to indicate negative changes experienced from participation in Health
Rocks!® and other recreation program activities. This disconfirmation is represented in
Table 12 and illustrated in Table 13.

Table 12
Comparing Quantitative and Transformed (Quantified) Qualitative Results

<table>
<thead>
<tr>
<th></th>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes/ Beliefs</th>
<th>General Assets</th>
<th>Leisure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional pretest—</td>
<td>−</td>
<td>↓</td>
<td>−</td>
<td>−</td>
<td>↑</td>
</tr>
<tr>
<td>posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retrospective pretest—</td>
<td>−</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformed</td>
<td>↑</td>
<td>↑</td>
<td>−</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>qualitative data²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ↑ = positive change; ↓ = negative change; − = no change or statistically
insignificant change.
²Transformed (quantified) qualitative data represents the type of change experienced by
the numerical majority of interview participants.

Table 13
Disconfirming Quantitative Indications of Negative Effect

<table>
<thead>
<tr>
<th>Qualitative Theme</th>
<th>Traditional Pretest—Posttest Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased knowledge about rates, causes, and consequences of tobacco, alcohol, and other drug use empowers youth to keep themselves, their family and friends from using.</td>
<td>I would help other kids like me stay away from alcohol or other drugs ($M = -.57895$, $SD = .83771$), $t(18) = -3.012, p \leq .05$ (two-tailed).</td>
</tr>
<tr>
<td>After participating in program activities, youth may use both active and passive resistance strategies to deal with negative peer pressure and avoid use of tobacco, alcohol, and other drugs.</td>
<td>Decreased level of skills ($M = -.106$, $SD = .671$), $t(19) = -2.057, p \leq .05$ (two-tailed).</td>
</tr>
</tbody>
</table>
Summary

Quantitative data were collected in two stages: a traditional pretest was conducted prior to program activities, and a retrospective pretest and posttest were each conducted after program activities. With the exception of two scales (i.e., knowledge and leisure) traditional pretest—posttest comparisons generally resulted in no significant change. Results of the traditional pretest—posttest comparisons suggest a self-reported decrease in skills and increase in leisure and life satisfaction. Contrastingly, retrospective pretest—posttest results suggest that participants perceived an overall increase in skills, attitudes and beliefs, general assets, and leisure, and no significant change on the knowledge scale resulting from participation in Health Rocks!® and other recreation program activities.

Qualitative data were collected concurrently with the retrospective pretest and posttest assessment. Four themes emerged from detailed analysis of interview data that, in general, suggest a positive increase in knowledge, skills, and potential for positive behaviors after participating in Health Rocks!® training and other recreation program activities: increased knowledge about rates, causes, and consequences of tobacco, alcohol, and other drug use empowers youth to keep themselves, their family and friends from using; youth may use both active and passive resistance strategies to deal with negative peer pressure and avoid use of tobacco, alcohol, and other drugs; previously attained knowledge, skills, and potential for positive behaviors are reinforced; and, participants experience leisure satisfaction through safe and fun recreation opportunities that provide positive introductions to lifelong leisure skills.
Statistically significant differences between the mean scores on pretest items and the mean scores on retrospective pretest items suggest the presence of a response shift bias. Qualitative results and transformed qualitative data, in general, also disconfirm traditional pretest—posttest cases that indicate negative change or no significant change experienced from participation in Health Rocks!® and other recreation program activities.
Chapter 5

Discussion

While rates of youth tobacco, alcohol, and other drug use have generally declined in recent decades, young people continue to smoke, drink, and use other drugs in significant numbers and some begin use at very young ages (Centers for Disease Control and Prevention, 2008). Literature indicates that work needs to continue in communities to help young people gain the strengths they need to avoid these types of health risk behaviors. Positive youth development literature focuses on the promotion of individual strengths and the facilitation of experiences to help youth develop in healthy ways (Benson, 2006; Hamilton et al., 2004; National Research Council and Institute of Medicine, 2002; Pittman et al., 2002; Search Institute, n.d.). Research suggests that the more strengths young people experience, the less likely they will be to engage in risk behaviors (Benson, 2006; Hamilton et al., 2004; National Research Council and Institute of Medicine, 2002; Pittman et al., 2002; Search Institute, n.d.).

This study examined a strengths-based approach to help youth perceive higher levels of knowledge, skills, and potential for positive behaviors by incorporating Health Rocks!® training into a youth recreation program. Health Rocks!® is aimed at helping young people develop specific strengths associated with reduced tobacco, alcohol, and other drug use while also assisting participants to understand the influences and health consequences of tobacco, alcohol, and other drug use so that they are best equipped to make healthy choices (National 4-H Council, 2009). Recreation program activities are intended, in part, to promote leisure satisfaction, a factor that research has associated with
the avoidance of substance use among youth (National Center on Addiction and Substance Abuse at Columbia University, 2003).

A general interpretation of the results of this study provides evidence that participation in Health Rocks!® and recreation program activities is effective in helping youth perceive higher levels of knowledge, skills, and potential for positive behavior. Even for youth who may not experience increases, results of this study suggest these strengths were likely to have been attained elsewhere and participation in program activities plays a reinforcing role. For example, the apparent lack of quantitative change in knowledge is indicative of what Schroeder and Johnson (2009) suggest about conventional information-only programs that attempt to provide students with knowledge about tobacco, alcohol, and other drugs. Youth who participate in school-based prevention programs might gain basic knowledge but lack higher levels of attitudes and skills that provide significant added protection against risk behaviors. In spite of literature that emphasizes the importance of using evidenced-based prevention programs with youth, only 42.6% of middle schools in the United States who participated in a nationwide study are using an evidence-based curriculum, and only 23% of reported they used an evidence-based curriculum a majority of the time (Ringwalt, Vincus, Hanley, Ennet, Bowling, Rohrbach, 2009). Results of this study suggest that Health Rocks!® and recreation program activities might serve as an evidence-based alternative to prevention curriculum currently being used with youth.

Results of this study support literature that suggests contamination of results due to response shift bias when traditional pretest methodology is used, and that a retrospective pretest—posttest survey method offers greater accuracy in self-reported
changes in participant knowledge, skill, and potential for positive behaviors (Arnold, 2002; Davis, 2003; Pratt, Mcguigan, & Katzev, 2000; Raidl et al., 2004; Rockwell & Kohn, 1989; Rohdes & Jason, 1987; Rohs, 1999). Interpretation of the results of this study was complicated by the sometimes contradictory results of each respective quantitative method (i.e., traditional pretest—posttest versus the retrospective pretest—posttest comparison). Consistent with the findings of previous research, retrospective pretest scores in this study were typically lower than traditional pretest scores, suggesting response shift bias. The occurrence of this phenomenon here is likely due to the fact that, as Pratt, Mcguigan, and Katzev (2000) suggest, participants did not have a complete understanding of survey content to accurately respond to the pretest questions and overestimated their level of knowledge on each scale. When responding to the retrospective pretest, participants were able to apply improved understandings of program content to their prior knowledge, skills, attitudes, and behaviors and this likely impacted their self-assessment and provides a more accurate measure of self-reported change as suggested by Rockwell and Kohn (1989). In all but one case (i.e., attitudes/beliefs), when results of the traditional pretest—posttest comparison disagreed with the retrospective pretest—posttest comparison, the qualitative data confirmed the results of the retrospective pretest—posttest and disconfirmed the results of the traditional pretest—posttest comparison. This comparison adds evidence to the suggestion that a retrospective pretest—posttest method might be a more valid measure when youth are asked to self-report knowledge and behaviors in order to examine change resulting from a program or intervention.
Limitations

The results of this study are limited due to several factors. First, the small quantitative sample size impacts the generalizability of results. This study represents the evaluation of activities at one youth recreation program. While approximately fifty-five different youth were enrolled in the program over the course of the summer, families pre-registered on a weekly basis, and approximately fifteen youth received no Health Rocks!® training as a result of their attendance patterns. Of the remaining youth who completed the training, twenty-seven agreed to participate in the research project. Twenty youth fulfilled their responsibilities as participants in the study by submitting all of the evaluation tools: traditional pretest, retrospective pretest, and posttest surveys.

It is also important to recognize the inherent bias that results from the researcher’s employment at the program site, responsibility for managing program activities, and as the facilitator of Health Rocks!® training. As a result, the researcher had varying degrees of interpersonal relationships with program staff, participants, and families and a significant interest in the success of the program. While sampling methods and triangulation of results are intended to offset potential bias from an internal evaluator, the risks of such bias must be acknowledged.

As with any strategy, there are limitations related to the design of the model utilized for research. One of the limitations of mixed methods triangulation as articulated by Creswell (2009) is the degree of difficulty involved in attempting to make direct comparisons between results of multiple analyses in different forms. For example, in the case of this study, data transformation—while employed to aid in the generalized interpretation of results—cannot provide a direct comparison of quantitative and
qualitative data since the survey data represents the combination of scores on more than one related item while the qualitative results represent any change at all without regard to degree or the number of additional factors that may or may not be involved. This challenge was complicated further by the study’s use of more than one quantitative measure (i.e., traditional pretest—posttest and retrospective pretest—posttest), and difficulty was experienced in attempts to resolve inconsistencies that arose when results were compared. To address this dilemma, the qualitative data is relegated primarily to a supporting role in order to aid in the interpretation of results and reconcile differences between traditional and retrospective pretest score in order to make generalizations about program impact and survey methodology. An additional limitation of the design, however, was the collection of qualitative data solely at the end of the program. One-on-one interviews served as a retrospective measure, and it could be argued that is the reason it most often confirms retrospective pretest—posttest comparison results.

**Implications for Practice**

The results of this study support what research literature suggests about the increased benefit youth might experience from an integrated prevention and promotion approach to addressing tobacco, alcohol, and other drug use (National Research Council and Institute of Medicine, 2002; Phelps, Balsano, Fay, Peltz, Zimmerman, Lerner, & Lerner, 2007). It is inferred from the results of this study that when strengths-based prevention curriculum aimed at deterring tobacco, alcohol, and other drug use is implemented alongside recreation program experiences to promote leisure satisfaction, youth experience the protective benefit of both: something neither can provide alone. This has implications for practitioners in the fields of youth development, prevention, and
recreation and leisure who are concerned with the healthy development of youth. Results of this study suggest that Health Rocks!® training, in general, is effective in supporting increased knowledge, skills, and other potential for positive behaviors, but perhaps without the added benefit of the protective factor leisure satisfaction may offer. Likewise, results of this study suggest recreation program activities help youth experience the protective factor of leisure satisfaction, but without the specific benefits of strengths-based prevention curriculum targeting tobacco, alcohol, and other drug use. Youth who participate in programs that combine the two are likely to experience greater benefit than those who participate in programs that utilize one and not the other.

The results of data triangulation in this study help support literature that favors a retrospective pretest over a traditional pretest when participants are self-reporting perceived changes in knowledge, skills, attitudes, and behaviors. The practical implication of this finding is important to practitioners and evaluators who are interested in designing self-report survey instruments to measure the impact of youth programs: a retrospective pretest—posttest design is useful and might be more appropriate than a traditional pretest—posttest design when examining self-reported changes in participant knowledge, skill, and potential for positive behaviors. In general, while traditional pretest and posttest comparisons certainly have their place in some situations (e.g., measuring participant demonstrations of knowledge or skill) a retrospective pretest approach might be used more broadly in the social sciences to measure changes perceived by individuals who participate in a variety of programs or interventions.

Professionals in nonformal education settings are often interested in reporting the impact of a specific program or intervention within the sole context of the setting in
which they work—regardless of its size. Quantitative research methods benefit from larger sample sizes (Creswell, 2009), but large sample sizes might not always be the reality for some practitioners. This study demonstrates how a mixed methods examination of program activities might provide a more comprehensive and accurate understanding of impact by comparing different types of data to confirm or disconfirm results. This study demonstrates how quantitative data from a small sample size can be validated by qualitative data by way of triangulation in order to confidently draw conclusions from the results of evaluation activities within a small program setting.

**Implications for Future Research**

This study used a combined retrospective pretest-posttest instrument that placed the retrospective pretest and posttest side-by-side to be answered at the same time; however, a variety of retrospective pretest and posttest comparison approaches are utilized in both research and practice. In research published since the initiation of this study, Nimon, Zigarmi, and Allen (2011) suggest that a design utilizing separate posttest and retrospective pretest surveys results in greater validity and the least biased measure of program effectiveness. Future research might explore this finding by administering a combined retrospective pretest—posttest survey to one group and separate retrospective pretest and posttest instruments to another group to compare results, especially when results can be triangulated with other forms of data.

The impact of Health Rocks!® and recreation program activities on knowledge, skills, and potential for positive behaviors, the presence of response-shift bias, and discrepancies between traditional pretest—posttest and retrospective pretest—posttest comparison might be even better understood by replications of this study that add one-on-
one interviews concurrent with the traditional pretest at program intake to produce an additional phase of qualitative data collection. A larger quantitative sample is also needed to generalize the results to the entire population and accurately examine effects of various degrees of program dosage experienced by participants. Increased complexity might be added to the design by introducing a control or comparison group to further understand and make claims about the direct effects of program participation. Longitudinal research will also be needed to determine whether or not the benefits of *Health Rocks!*® and recreation program activities have a sustained effect on youth throughout adolescence and into adulthood, or if the immediate effect of program experiences diminishes over time.
References


Appendix A

40 Developmental Assets for Adolescents

<table>
<thead>
<tr>
<th>Category</th>
<th>Asset Name and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Assets</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Support</strong></td>
<td>1. Family support: Family life provides high levels of love and support.</td>
</tr>
<tr>
<td></td>
<td>2. Positive family communication: Young person and her or his parent(s) communicate positively, and young person is willing to seek advice and counsel from parents.</td>
</tr>
<tr>
<td></td>
<td>3. Other adult relationships: Young person receives support from three or more nonparent adults.</td>
</tr>
<tr>
<td></td>
<td>5. Caring school climate: School provides a caring, encouraging environment.</td>
</tr>
<tr>
<td></td>
<td>6. Parent involvement in schooling: Parent(s) are actively involved in helping young person succeed in school.</td>
</tr>
<tr>
<td><strong>Empowerment</strong></td>
<td>7. Community values youth: Young person perceives that adults in the community value youth.</td>
</tr>
<tr>
<td></td>
<td>8. Youth as resources: Young people are given useful roles in the community.</td>
</tr>
<tr>
<td></td>
<td>9. Service to others: Young person serves in the community one hour or more per week.</td>
</tr>
<tr>
<td></td>
<td>10. Safety: Young person feels safe at home, school, and in the neighborhood.</td>
</tr>
<tr>
<td><strong>Boundaries &amp; Expectations</strong></td>
<td>11. Family boundaries: Family has clear rules and consequences and monitors the young person’s whereabouts.</td>
</tr>
<tr>
<td></td>
<td>12. School Boundaries: School provides clear rules and consequences.</td>
</tr>
<tr>
<td></td>
<td>13. Neighborhood boundaries—Neighbors take responsibility for monitoring young people’s behavior.</td>
</tr>
<tr>
<td></td>
<td>14. Adult role models: Parent(s) and other adults model positive, responsible behavior.</td>
</tr>
<tr>
<td></td>
<td>15. Positive peer influence: Young person’s best friends model responsible behavior.</td>
</tr>
<tr>
<td></td>
<td>16. High expectations: Both parent(s) and teachers encourage the young person to do well.</td>
</tr>
<tr>
<td><strong>Constructive Use of Time</strong></td>
<td>17. Creative activities: Young person spends three or more hours per week in lessons or practice in music, theater, or other arts.</td>
</tr>
<tr>
<td></td>
<td>18. Youth programs: Young person spends three or more hours per week in sports, clubs, or organizations at school and/or in the community.</td>
</tr>
<tr>
<td></td>
<td>19. Religious community: Young person spends one or more hours per week in activities in a religious institution.</td>
</tr>
<tr>
<td></td>
<td>20. Time at home: Young person is out with friends “with nothing special to do” two or fewer nights per week.</td>
</tr>
</tbody>
</table>
## Internal Assets

### Commitment to Learning

21. **Achievement Motivation:** Young person is motivated to do well in school.
22. **School Engagement:** Young person is actively engaged in learning.
23. **Homework:** Young person reports doing at least one hour of homework every school day.
24. **Bonding to School:** Young person cares about her or his school.
25. **Reading for Pleasure:** Young person reads for pleasure three or more hours per week.

### Positive Values

26. **Caring:** Young person places high value on helping other people.
27. **Equality and social justice:** Young person places high value on promoting equality and reducing hunger and poverty.
28. **Integrity:** Young person acts on convictions and stands up for her or his beliefs.
29. **Honesty:** Young person “tells the truth even when it is not easy.”
30. **Responsibility:** Young person accepts and takes personal responsibility.
31. **Restraint:** Young person believes it is important not to be sexually active or to use alcohol or other drugs.

### Social Competencies

32. **Planning and decision making:** Young person knows how to plan ahead and make choices.
33. **Interpersonal Competence:** Young person has empathy, sensitivity, and friendship skills.
34. **Cultural Competence:** Young person has knowledge of and comfort with people of different cultural/racial/ethnic backgrounds.
35. **Resistance skills:** Young person can resist negative peer pressure and dangerous situations.
36. **Peaceful conflict resolution:** Young person seeks to resolve conflict nonviolently.

### Positive Identity

37. **Personal power:** Young person feels he or she has control over “things that happen to me.”
38. **Self-esteem**—Young person reports having a high self-esteem.
39. **Sense of purpose**—Young person reports that “my life has a purpose.”
40. **Positive view of personal future**—Young person is optimistic about her or his personal future.
Appendix B

Institutional Review Board Approval Letter

July 2, 2010

Daniel Payzant
Department of Child, Youth and Family Studies
1345 S 8th St Lincoln, NE 68502

Yan Xia
Department of Child, Youth and Family Studies
102 ASH, UNO, 68182-0214

IRB Number: 20100710900EP
Project ID: 10900
Project Title: Examining healthy living training in a youth recreation program

Dear Daniel:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board’s opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution’s Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46). Your project was approved as an Expedited protocol, categories 6 & 7.

Date of EP Review: 06/01/2010

You are authorized to implement this study as of the Date of Final Approval: 07/02/2010. This approval is Valid Until: 07/01/2011.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:
* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.
If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

[Signature]

William Thomas, Ph.D.
Chair for the IRB
Appendix C

Cover Letter

UNIVERSITY OF
Nebraska
Lincoln

COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Child, Youth and Family Studies

You’re Invited!
Examining Healthy Living Training in a Youth Recreation Program

Dear Youth Participants and Parents,

We invite youth enrolled in Irving Recreation Center’s “Camp Challenge” to participate in an evaluation project that will occur in two stages, before and after participation in Health Rocks® training and other recreation program activities. We are interested to know what youth participants have learned from the Health Rocks® training and youth recreation program activities in general. Specifically, this evaluation will assess participants’ increased knowledge, changes in beliefs and attitudes, and increased skills and self-reported confidence in using positive behaviors targeted by the curriculum after their participation in Health Rocks® intermediate level training and recreation program activities aimed at promoting leisure satisfaction.

Surveys will ask questions about participants’ knowledge, attitude, skill and/or behaviors before and after Health Rocks® training and recreation program activities. Demographic information such as age, grade, ethnicity, etc. will also be asked. Each survey mainly consists of thirty-nine 4-point scale questions and will take approximately 15-20 minutes to complete. One-on-one interviews will be conducted with some participants. Not everyone will be interviewed. Participants who are selected for an interview will be asked eight questions about Health Rocks® training and other recreation program experiences. The interview will last approximately 30 minutes.

There are no known risks or discomforts associated with this evaluation project. If participants feel uncomfortable with any question in the surveys or interview, they can stop and withdraw from the participation at any time. The survey and interview are confidential. No names will be linked to the information provided.

There is no monetary compensation for answering the survey questionnaires or for being interviewed.

If you have any questions about the surveys or interview, or if you have any questions concerning this evaluation project, please don’t hesitate to contact Den Payzant by email (dpayzant@lincoln.ne.gov) or phone (402-441-7954) and/or Dr. Yan R. Xia by email (xia2@unl.edu) or phone (402-554-3259).

Thank you!

Principal Investigator: Co-principal Investigator:
Daniel S. Payzant Yan R. Xia, Ph.D.
2010 Van Dom Child, Youth and Family Studies
Lincoln, NE 68502-3951 251 MABL, University of Nebraska-Lincoln
Office Phone: (402) 441-795 Office Phone: (402) 554-3259/472-4086

P.O. Box 80001 / Lincoln, NE 68501-0001
(402) 472-3957 / FAX (402) 472-6170
Appendix D

Recruitment E-mail

Subject: Examining Healthy Living Training in a Youth Recreation Program

As you may already know, youth enrolled in Irving Recreation Center’s “Camp Challenge” will participate in Health Rocks!® training this summer. We invite youth to be a part of program evaluation activities that occur both before and after participation in Health Rocks!® training and other recreation program activities. We are interested to know what youth participants have learned from the Health Rocks!® training and youth recreation program activities in general. Specifically, this evaluation will assess participants’ increased knowledge, changes in beliefs and attitudes, and increased skills and self-reported confidence in using positive behaviors targeted by the curriculum after their participation in Health Rocks!® intermediate level training and recreation program activities aimed at promoting leisure satisfaction.

Surveys will ask questions about participants' knowledge, attitude, skill and/or behaviors before and after Health Rocks!® training and recreation program activities. Demographic information such as age, grade, ethnicity, etc. will also be asked. Each survey mainly consists of thirty-nine 4-point scale questions and will take approximately 15-20 minutes to complete. One-on-one interviews will be conducted with some participants. Not everyone will be interviewed. Participants who are selected for an interview will be asked eight questions about Health Rocks!® training and other recreation program experiences. The interview will last approximately 30 minutes.

There are no known risks or discomforts associated with this evaluation project. If participants feel uncomfortable with any question in the surveys or interview, they can stop and withdraw from the participation at any time. The survey and interview are confidential. No names will be linked to the information provided.

There is no monetary compensation for answering the survey questionnaires or for being interviewed.

If you have any questions about the surveys or interview, or if you have any questions concerning this evaluation project, please don't hesitate to contact Dan Payzant by email (dpayzant@lincoln.ne.gov) or phone (402-441-7954) and/or Dr. Yan Ruth Xia by email (xia2@unl.edu) or phone (402-554-3259).

Please click on each link below to access the forms required for participation in this study.

- Parental Consent Form
- Youth Assent Form

Thank you!

Principal Investigator:

Daniel S. Payzant
2010 Van Dorn
Lincoln, NE 68502-3951
Office Phone: (402) 441-7954

Co-principal Investigator:

Yan R. Xia, Ph.D.
Child, Youth and Family Studies
253 MABL, University of Nebraska-Lincoln
Lincoln, NE 68588-0236
Office Phone: (402) 554-3259/ 472-4086
Appendix E

Parental Informed Consent Form

Exercising Healthy Living Training in a Youth Recreation Program

You are invited to permit your child to participate in this evaluation study. The following information is provided in order to help you to make an informed decision whether or not to allow your child to participate.

Purpose of the Evaluation Plan: This evaluation will measure implementation outputs and the degree to which youth participants achieve the learning objectives and anticipated outcomes of Health Rocks® curriculum implementation and perceived benefit from youth recreation program participation. Outputs, anticipated outcomes, and perceived benefit are specifically related to building strengths and skills associated with reduced tobacco, alcohol, and other drug use. This evaluation will assess participants’ increased knowledge, changes in beliefs and attitudes, increased skills, and self-reported confidence in using positive behaviors after participating in Health Rocks® intermediate-level curriculum and recreation program activities.

Procedures: Two survey methods will be used: one pretest to measure reported knowledge, attitudes, skill and/or behavior prior to participation in Health Rocks® training and youth recreation program activities, and one survey method with retrospective measures to assess the increased knowledge, skills, and potential for positive behaviors after youth participate in Health Rocks® and recreation program activities. The retrospective survey (post-test method of evaluation) measures program impact by asking questions regarding knowledge, attitude, skill and/or behaviors at the present time and then asking participants to report what the knowledge, attitude, skill and/or behavior were previously. The survey questions ask specifically about knowledge, attitudes, and resistance skills related to tobacco, alcohol, and other drugs, recreation program activities, and leisure satisfaction. Demographic questions that ask about age, gender, race, and ethnicity will also be asked. Each survey mainly consists of thirty-nine 4-point scale questions. It will take approximately 15-20 minutes to complete each survey.

One-on-one interviews will be conducted in a recreation center meeting room by the principal investigator with a random sample of participants. Each participant will have an equal chance of being selected, but not all participants will be interviewed. If your child is randomly selected for an interview, he or she will be asked eight open-ended questions associated with Health Rocks® training and other recreation program experiences. Each interview will last approximately 30 minutes. Interviews will be recorded and audiotape recordings will be transcribed by the principle investigator to assist in analyzing data.

Risks and Benefits: There are no known risks or discomforts associated with this research. If your child feels uncomfortable with any questions in the survey or interview, she or he can stop at any time. There are no direct benefits to participation in this evaluation project. Hopefully, it may help your child to reflect upon, and personally evaluate, what she or he has attained from healthy living training through Health Rocks® training and within the context of the youth recreation program.

Confidentiality: No identifying information will be collected in this evaluation project; however, due to the small sample size, it cannot be guaranteed that participant identities will not be known. The following steps will be taken to minimize this risk. Each participant will be assigned an identification number and names will not be associated with survey data or audiotape recordings. In the event participants choose to share any negative
information, it will not have an adverse effect on any recreation program relationships. Data, audiotapes, and the master attendance sheet will be stored in a locked cabinet in principle investigator’s office. Only Mr. Daniel S. Payzant and Dr. Yan Ruth Xia can access the data, audiotapes, and master attendance sheet. Mr. Daniel S. Payzant intends to report findings in thesis format. The results obtained from this study may also be used for writing reports, scientific journal articles, and presented at scientific meetings. Neither names nor identifying characteristics will be used in reporting the results of this research. Data will be reported in aggregate. If interview responses are quoted, a participant number or pseudonym will be used as to not identify individuals based upon name or their characteristics. All data files, records, and audiotapes will be destroyed within the three years after the research project completes.

Compensation: There is no compensation for participation in this evaluation project.

Opportunity to Ask Questions: If you have any questions about the survey or interview, you can ask any questions concerning this evaluation project and have those questions answered before agreeing to participate in or during the study. You can contact Mr. Daniel S. Payzant through email (dpayzant@lincoln.ne.gov) or phone (402-441-7654) and Dr. Yan Ruth Xia through email (yxia@unomaha.edu) or phone (402-554-3259). If you have questions concerning your child’s rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska–Lincoln Institutional Review Board by phone (402-472-6965).

Freedom to Withdraw: You and your child are free to decide whether or not your child will participate in this evaluation study. Your child may also end her or his participation at any time without negatively affecting her or him or your relationship with the trainers, researchers, the City of Lincoln Parks and Recreation Department, or the University of Nebraska–Lincoln. Your decision will not result in any loss of benefits to which you are otherwise entitled.

DOCUMENTATION OF INFORMED CONSENT

You are voluntarily making a decision whether your child wishes to participate in this research project. Your signature certifies whether or not you have decided to participate in either/bot research procedure(s) listed below having read and understood the information presented. You will be given a copy of this consent form to keep for your records.

I agree for my child to participate in this study by being surveyed: □ NO □ YES

I agree for my child to participate in this study by being interviewed and audio taped: □ NO □ YES

__________________________  __________________________
Child’s Name (Print)          Signature of Parent/Legal Guardian

__________________________  __________________________
Date                  Date
To the best of my knowledge the parent/legal guardian is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

Signature of Principal Investigator: ____________________________ Date: ____________________________

Principal Investigator: Daniel S. Payzant
2010 Van Dorn
Lincoln, NE 68502-3951
Office Phone: (402) 441-7954

Co-principal Investigator: Yan R. Xia, Ph.D.
Child, Youth and Family Studies
251 MABL, University of Nebraska-Lincoln
Lincoln, NE 68588-0236
Office Phone: (402) 554-3259/ 472-4086
Appendix F

Youth Informed Assent Form

We are inviting you to participate in this study because you are a participant of the Health Rocks® training and youth recreation program, and we are interested to know what you have learned.

Two surveys will ask you questions about your knowledge, attitude, skill and/or behaviors, one before Health Rocks® training and recreation program activities and the other after the Health Rocks® training and recreation program activities. The survey questions deal with knowledge, attitudes, skills and/or behaviors related to tobacco, alcohol, and other drugs, recreation program activities, and about your free time. A few questions ask about things like your age, gender, race, and ethnicity. Each survey mainly consists of thirty-nine 4-point scale questions. It will take about 15-20 minutes to complete each survey.

One-on-one interviews will be conducted by Mr. Daniel S. Payzant with randomly selected participants in a recreation center meeting room. All participants will have an equal chance to be selected, but not everyone will be interviewed. If you are selected for an interview, you will be asked eight questions about Health Rocks® training and other recreation program experiences. The interview will last approximately 30 minutes. Interviews will be audio taped.

There are no known risks or discomforts associated with this evaluation. If you ever feel uncomfortable with some questions in the survey or interview, you can stop at any time. There are no direct benefits to you in this evaluation project. Hopefully, it may help you think about what you have learned from Health Rocks® training and recreation program activities.

The survey and interview are confidential. Your answers will not be linked to your name. The data, attendance sheet, and any audiotape recordings will be stored in a locked cabinet in the evaluator's office. Only Mr. Daniel S. Payzant and Dr. Yan Ruth Xia can access the data, attendance sheet with your ID number, and audiotapes. Mr. Daniel S. Payzant plans to share his findings in a school paper. We may also share our findings with others at meetings or in articles. Results will be reported without names and characteristics that might cause others to be able to identify you.

You can ask any questions about this project and have them answered before agreeing to participate in, or during, the study. You can ask Mr. Daniel S. Payzant by email (dpayzant@lincoln.ne.gov) or phone (402-441-7954) and Dr. Yan Ruth Xia by email (nxia2@unl.edu) or phone (402-554-3259). If you have any questions about your rights as a evaluation participant that have not been answered by the evaluators or to report any concerns about the evaluation, you may contact the University of Nebraska-Lincoln Institutional Review Board by phone (402-472-6965).

You are free to decide whether or not you will participate in this evaluation study. You may also stop answering questions that make you feel uncomfortable at any time without negatively affecting your relationship with the training leaders or the youth recreation program. Your decision will not result in any loss of benefits that you have or are entitled to.
DOCUMENTATION OF INFORMED ASSENT

You are voluntarily making a decision whether you wish to participate in this research project. Your signature shows that you have decided to participate having read and understood the information given above. You will be given a copy of this consent form to keep.

Name (Print)

Signature of Participant __________________________ Date __________________________

To the best of my knowledge the individual named above is voluntarily and knowingly giving informed assent to participate in this research study.

Signature of Principal Investigator __________________________ Date __________________________

Principal Investigator: Daniel S. Payzant
2010 Van Dorn
Lincoln, NE 68502-3951
Office Phone: (402) 441-7954

Co-principal Investigator: Yan R. Xia, Ph.D.
Child, Youth and Family Studies
251 MAEL, University of Nebraska-Lincoln
Lincoln, NE 68588-0236
Office Phone: (402) 554-3259/472-4086
Appendix G

Institutional Approval Letter

University of Nebraska Institutional Review Board (IRB):

I have reviewed Daniel Payzant’s evaluation research protocol, including letters of consent and assent, entitled “Examination of Healthy Living Training in a Youth Recreation Program.” I understand what he is asking of participants, and in my authority to do so, I grant him permission to conduct this study at the City of Lincoln’s Irving Recreation Center.

If I have any further questions about this study, I know Dan can be reached at 402-441-7954 or via e-mail at dpayzant@lincoln.ne.gov. I also understand that if I have any questions regarding IRB approval or the rights of research participants I can contact Research Compliance Services at 402-472-6965 or via e-mail at irb@unl.edu.

Signature

Date

Mr. Lynn Johnson, Director
Lincoln Parks and Recreation
2740 A Street
Lincoln, NE 68502
Phone: 402-441-7847
Appendix H

Institutional Directorial Order

BY VIRTUE OF THE AUTHORITY VESTED IN ME BY THE CHARTER OF THE CITY
OF LINCOLN, NEBRASKA:

Pursuant to the delegation of authority under AR 26 adopted by Executive
Order No. 81495, I hereby execute and approve on behalf of the City of Lincoln, the attached
Agreement with Dan Payzant to perform a research project entitled “Examination of
Healthy Living Training in a Youth Recreation Program” at Irving Recreation Center.

The City Clerk is hereby directed to return the signed copy of this Directorial Order and
Contract to Lynn Johnson, Director of Lincoln Parks and Recreation Department.

Dated this 1st day of July, 2010.

Approved as to Form &

Legality

Approved:

Don Herz, Finance

City Attorney

Lynn Johnson

Parks & Recreation

FILED

JUL 1 2010

CITY CLERK'S OFFICE
LINCOLN, NEBRASKA
AGREEMENT

This Agreement is between the City of Lincoln, Nebraska on behalf of Lincoln Parks & Recreation Department ("City") and Dan Payzant as outlined below.

Dan Payzant has made request to the City of Lincoln, Nebraska and the Lincoln Parks & Recreation Department for permission to perform a research project entitled "Examination of Healthy Living Training in a Youth Recreation Program" ("Research Project") at Irving Recreation Center as outlined in his UNL Institutional Review Board Research Protocol Submission dated May 21, 2010.

For and in consideration of this request being granted, Dan Payzant shall indemnify, defend and hold harmless City, its officers, agents and employees from and against claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from performance of this Research Project and associated activities, that results in any claim for damage whatsoever, including without limitation, any bodily injury, sickness, disease, death, or any injury to or destruction of tangible or intangible property, copyright infringement, including any loss of use resulting therefrom that is caused in whole or in part by the intentional or negligent act or omission of Dan Payzant, or anyone for whose acts any of them may be liable. This section will not require Dan Payzant to indemnify or hold harmless City for any losses, claims, damages, and expenses arising out of or resulting from the sole negligence of City. City does not waive its governmental immunity by entering into this Agreement and fully retains all immunities and defenses provided by law. This section survives any termination of this Agreement.

Dan Payzant further agrees that the evaluations or any other activities associated with this Research Project that are not a part of the Lincoln Parks & Recreation's programs and his work duties as the Director of Irving Recreation Center shall not be performed during work hours or for compensation by the City. Dan Payzant also agrees to conduct all activities related to the Research Project in a lawful manner.

IN WITNESS WHEREOF, Dan Payzant and City hereby execute this Agreement.

Dan Payzant Signature: [Signature]

Director Signature: [Signature]

Date of Execution: 04/17/10
Appendix I

Instruments

ID#: ______

Participant Intake Survey

Your participation in this survey is voluntary. Since we are not asking for your name, nobody will know your answers. The survey will take about 15-20 minutes.

Part 1. Tell us about your experience with *Health Rocks®*. Read each statement and circle the number that best represents your knowledge or experience:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I believe that...</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Most young people like me do not use drugs.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 How I feel can affect what I do.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Drinking or using drugs can lead to car accidents that could kill or harm myself and others.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Once you start using drugs, it is hard to stop.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Using drugs can destroy my relationships with my family and friends.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 People who use drugs sometimes see or hear things that are not really there.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Misuse of alcohol can cause people to forget things.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 People who smoke can die from lung cancer.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 People who use drugs are more likely to be hurt by others.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I believe that...</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 It is not worth taking the risk to try cigarettes, alcohol, and other drugs.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Managing stress in a positive way is important.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 I have goals for myself.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 If one of my friends was using drugs, I should tell them to stop.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 If a friend asked me to try cigarettes, alcohol, and drugs, it would be hard for me to say no.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Stress can sometimes make me work harder.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Trying drugs just once is not a big deal.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 People are influenced by TV even without knowing it.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 My cultural background has a huge influence on me.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Strongly Disagree  | Disagree  | Agree  | Strongly Agree
--- | --- | --- | ---
I believe that...
1. I can make positive decisions. | 1 2 3 4 | | |
2. If a friend wanted to try drugs, I can talk them out of it. | 1 2 3 4 | | |
3. I am able to choose healthy behaviors to deal with stress. | 1 2 3 4 | | |
4. Using drugs is not a way to deal with stress. | 1 2 3 4 | | |
5. I can gather information before making decisions. | 1 2 3 4 | | |
6. When I feel stressed I am able to talk about it with people I trust. | 1 2 3 4 | | |
7. I will never be hooked on drugs. | 1 2 3 4 | | |
8. I am able to say “no” if someone offered my drugs. | 1 2 3 4 | | |
9. I am able to tell when TV or other kinds of ads influence my decisions. | 1 2 3 4 | | |

### Strongly Disagree  | Disagree  | Agree  | Strongly Agree
--- | --- | --- | ---
In general...
1. It is important for me to help others in the community. | 1 2 3 4 | | |
2. I don't have to drink or smoke even if some other young people do it. | 1 2 3 4 | | |
3. It is important for me to stay focused on learning at school. | 1 2 3 4 | | |
4. It is important for me to stand up for what I believe. | 1 2 3 4 | | |
5. Before making a decision, I need to think about how my choices will affect my future. | 1 2 3 4 | | |
6. I can achieve most of the goals I have for myself. | 1 2 3 4 | | |
7. I feel good about myself. | 1 2 3 4 | | |
8. I would help other kids like me to stay away from alcohol or other drugs. | 1 2 3 4 | | |
PART 2. Tell us more about yourself.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe that...</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1 Most of the time I am not bored.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 I know about a lot of fun activities that I can do in my free time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 I have the skills needed to do a lot of fun and interesting things.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 I am happy with my life.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Place a check (✓) next to the answer that describes you.

1. I am a: ___ Girl ___ Boy
2. My age is: ___ 11 ___ 12 ___ 13 ___ 14
3. Grade next year: ___ 6 ___ 7 ___ 8
4. Race: ___ Caucasian ___ African American/Black ___ Native American ___ Asian ___ Multi-racial ___ Unknown
5. Ethnicity: ___ Hispanic/Latino ___ Not Hispanic/Latino
6. How many Health Rocks® activities have you completed? ___
7. How many hours of Health Rocks® activities have you completed? ___
Participant Exit Survey

Your participation in this survey is voluntary. Since we are not asking for your name, nobody will know your answers. The survey will take about 15-20 minutes.

**Part 1. Tell us about your experience with Health Rocks®.**
Read each statement and circle the number that best represents your knowledge or experience:

1. **Now** = at the present time after having completed Health Rocks® training.
2. **Before Health Rocks®** = before your participation in Health Rocks® training.

<table>
<thead>
<tr>
<th>Strongly Disagree 1</th>
<th>Disagree 2</th>
<th>Agree 3</th>
<th>Strongly Agree 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe that...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Most young people like me do not use drugs.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>2 How I feel can affect what I do.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>3 Drinking or using drugs can lead to car accidents that could kill or harm myself and others.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>4 Once you start using drugs, it is hard to stop.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>5 Using drugs can destroy my relationships with my family and friends.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>6 People who use drugs sometimes see or hear things that are not really there.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>7 Misuse of alcohol can cause people to forget things.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>8 People who smoke can die from lung cancer.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>9 People who use drugs are more likely to be hurt by others.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
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</tr>
<tr>
<td><strong>1</strong></td>
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<td></td>
</tr>
<tr>
<td>I believe that...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is not worth taking the risk to try cigarettes, alcohol, and other drugs.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managing stress in a positive way is important.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have goals for myself.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If one of my friends was using drugs, I should tell them to stop.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If a friend asked me to try cigarettes, alcohol, and drugs, it would be hard for me to say no.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress can sometimes make me work harder.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trying drugs just once is not a big deal.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People are influenced by TV even without knowing it.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My cultural background has a huge influence on me.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe that...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can make positive decisions.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If a friend wanted to try drugs, I can talk them out of it.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am able to choose healthy behaviors to deal with stress.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using drugs is not a way to deal with stress.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can gather information before making decisions.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I feel stressed I am able to talk about it with people I trust.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will never be hooked on drugs.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am able to say “no” if someone offered my drugs.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am able to tell when TV or other kinds of ads influence my decisions.</td>
<td>Now</td>
<td>1 2 3 4</td>
<td>Before Health Rocks®</td>
</tr>
</tbody>
</table>
ID#: _______

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general...</td>
<td>Now</td>
<td></td>
<td>Before Health Rocks®</td>
</tr>
<tr>
<td>1 It is important for me to help others in the community.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>2 I don't have to drink or smoke even if some other young people do it.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>3 It is important for me to stay focused on learning at school.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>4 It is important for me to stand up for what I believe.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>5 Before making a decision, I need to think about how my choices will affect my future.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>6 I can achieve most of the goals I have for myself.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>7 I feel good about myself.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>8 I would help other kids like me to stay away from alcohol or other drugs.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

PART 2. Tell us about your experience with summer day camp.

1. **Now** = at the present time after going to summer day camp.
2. **Before Summer Day Camp** = before attending summer day camp.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe that...</td>
<td>Now</td>
<td></td>
<td>Before Summer Day Camp</td>
</tr>
<tr>
<td>1 Most of the time I am not bored.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>2 I know about a lot of fun activities that I can do in my free time.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>3 I have the skills needed to do a lot of fun and interesting things.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>4 I am happy with my life.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

PART 3. Tell us more about yourself. Place a check (✓) next to the answer that describes you.

1. I am a:  
   - [] Girl  
   - [] Boy  
2. My age is:  
   - [] 11  
   - [] 12  
   - [] 13  
   - [] 14  
3. Grade next year:  
   - [] 6  
   - [] 7  
   - [] 8  
4. Race:  
   - [] Caucasian  
   - [] African American/Black  
   - [] Native American  
   - [] Asian  
   - [] Multi-racial  
   - [] Unknown  
5. Ethnicity:  
   - [] Hispanic/Latino  
   - [] Not Hispanic/Latino  
6. How many *Health Rocks®* activities have you completed?  
7. How many hours of *Health Rocks®* activities have you completed?  
   -  
Participant Interview Script

PART 1: Health Rocks®

INSTRUCTIONS: I am going to start by asking you a few questions about Health Rocks®. They are basic questions and you should not feel uncomfortable; if you do, let me know and we can skip any questions you do not wish to answer. Your name is not being recorded with your answers, so please be honest.

1. How has Health Rocks® changed your ideas about tobacco, alcohol, and other drugs?

2. What will you do the next time you are faced with a decision about tobacco, alcohol, and other drugs?

3. What have you liked most about Health Rocks®?

4. What have you liked least about Health Rocks®?

PART 2: Recreation Experience

INSTRUCTIONS: Next I am going to ask you some questions about summer day camp in general. These are also basic questions and you should not feel uncomfortable, but if you do, let me know and we can skip any questions you do not wish to answer. Again, be honest. Your name is not being recorded with your answers.

1. What about summer day camp makes it a fun way to spend your free time during the summer?

2. What about summer day camp makes it a boring way to spend your free time during the summer?

3. Explain some enjoyable activities you have learned about at summer day camp that you can use in your future free time when you are not at camp.

4. Explain what skills that you have learned at summer day camp that you can use in your future free time when you are not at camp.
## IRVING RECREATION CENTER - "CAMP CHALLENGE" MIDDLE GRADES SUMMER DAY CAMP LOGIC MODEL

**SITUATION:** It is the mission of the Lincoln Parks and Recreation Department to enhance the quality of life in our community by providing and maintaining quality parks and green spaces, and by offering enriching recreation activities and facilities for all people in Lincoln. Programs and services for children and youth promote physical, social, and learning skill development (PYD).

**INPUTS**
- Human resources and salaries budget
  - Center Director (full-time)
  - Lead Supervisor (part-time, office)
  - Day Camp Director (seasonal)
  - Day Camp Leaders (1:15)
  - Volunteers: AmeriCorps Members (2)
- Supplies budget
- Services budget

**Facilities**
- Neighborhood recreation center
- Middle school classrooms
- City park
- Municipal swimming pool
- Public library
- Off-site field trips

**Curriculum and activity resources**
- Lincoln Parks and Recreation Games Manual
- Agents of Change (4-H)
- Angling (NE Game & Parks)
- Art Van (Lux Center for the Arts)
- Games, v. 1 (Youth Specialties)
- Handball (National Handball Assoc.)
- Health Rocks! (4-H)
- National Archery in the Schools Program (NASP)
- Projects WET and Project WILD (NE Game & Parks)
- Quick Crowd Breakers and Games for Youth Groups (Group)
- Taking the Game to the Community (Woods Tennis Center)
- Yoga for Teens (Lubi)
- Others (TBD by program staff)

**Online/web resources**
- Parks & Rec. website
- Weekly e-mail newsletter

**ACTIVITIES**
- Apply for State of Nebraska Child Care License
- Market program
- Plan and facilitate summer Day Camp Leader training
  - Mission & Goals
  - Leadership I, II, & III
  - Cultural Competence
  - Team Building
  - Outings (van fleet, field trips, & pools)
  - Policies & Procedures
  - Forms & Records
  - CPR/First Aid
  - Blood borne pathogens
  - Weather emergencies
  - NASP
  - Handball
  - Angling
  - Schedule and conduct weekly staff meetings and planning sessions
  - Schedule and conduct weekly youth planning sessions
  - Communicate information about weekly outcome-based activities, announcements, and awards to parents
  - Plan and facilitate recreation program activities (physical, social, and learning skill development) using available community facilities

**OUTPUTS**
- Obtain State of Nebraska Child Care License
- Enroll 45 youth per week (budget & licensing ratio capacity)
- All staff and AmeriCorps Members (7) complete Day Camp Leader training
- 80% of enrolled participants and at least one family member will attend the pre-season open house and presentation of mission, goals, anticipated outcomes, and expectations
- All staff and AmeriCorps Members (7) participate in weekly staff meetings and planning sessions
- 60% of youth in attendance weekly will participate in weekly planning sessions
- Activities calendar, RERecognized Camper of the Week Awards, and camp newsletter will be posted to the website, emailed, and made available in hard copy at the rec. center weekly
- The youth recreation program will operate 11 hours per day, five days per week, for 10 weeks
- 100% of youth in attendance weekly will participate in outcome-based recreation program activities
- 50% of youth enrolled will complete the Lincoln Parks and Recreation Youth Outcome Assessment: Version 2
- 80% of parents of youth enrolled will complete the Lincoln Parks and Recreation Parent Outcome and Satisfaction Assessment

**CITY OF LINCOLN BUDGET PRIORITY (BP): 1.4 Safety & Security - Youth Activity**
- 75% of youth participants surveyed report finding program activities useful and interesting at 75% (BP)∗
- 90% of parents/guardians surveyed rate the program as good or excellent (BP)∗∗
- 85% of youth participants surveyed report experiencing opportunities for physical development (PYD)∗
- 85% of youth participants surveyed report experiencing opportunities for social development (PYD)∗
- 85% of youth participants surveyed report experiencing opportunities for learning skill development (PYD)∗

**Anticipated Short Term Outcomes**
- Lincoln Parks & Recreation Youth Outcome Assessment: Version 2
- Lincoln Parks and Recreation Parent Outcome & Satisfaction Assessment

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Appendix J

Recreation Program Logic Model