Promising Artists in Recovery Program Evaluation

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A Capstone Project presented in partial fulfillment of the

requirements for the degree of

Master of Arts in Policy Studies

University of Washington Bothell

Abstract

The implementation of interventions designed to address the needs of juvenile justice involved youth, while also conducting program evaluations, provides critical feedback to program deliverers and policy makers. This study used a mixed-methods approach to assess the impact of the Promising Artists in Recovery program (PAIR) on juvenile justice involved youth participants diagnosed with a substance abuse problem. This study relied upon an empirically based risk assessment, a post intervention youth survey focusing on risk and protective factors, and qualitative data from interviews with program deliverers. The use of risk and protective factors in assessing the likelihood of youth substance abuse problems has been validated through meta-analysis research and this study intends to answer whether there are significant differences in the dynamic risk and protective factors of youth involved in PAIR, as measured by the Positive Achievement Change Tool (PACT). A Wilcoxon Signed Rank Test and McNemar's Test was used to measure changes in PACT risk and protective factor scores from Time 1 (pre-PAIR) to Time 2 (post-PAIR). Post intervention participant survey results and PACT scores were analyzed to determine correlations between youth attendance and identified risk and protective factors. The study findings indicated youth involvement in PAIR significantly increased the number of positive adult non-family relationships, and interest and involvement in pro-social structured activities in the study group. Findings also revealed correlations in PAIR attendance and participant increases in encouraging adults, pro-social community ties, and youth motivation to abstain from drug and alcohol use. The results of this study have policy implications for juvenile justice stakeholders.

Keywords: juvenile justice policy, arts, risk and protective factors, and substance abuse

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CHAPTER 1

Chapter 1-Purpose of the Study:

The intent of this study is to examine the effects of the Promising Artists in Recovery program (PAIR) on juvenile justice involved youth in Snohomish County, Washington. A report published in 2011 by the Office of Juvenile Justice and Delinquency Prevention (OJJDP) revealed that in 2008, 57% (322,900) of adjudicated delinquency cases nationally resulted in formal probation being ordered by the court (Puzzanchera, 2011). Nationally, the highest recorded juvenile arrest rate for the years 1980-2009 was 9,107 arrests per 100,000 youth, documented in 1996, while the arrest rate dropped to 5,804 per 100,000 youth age 10-17 in 2009, the lowest level recorded in 29 years (National Center for Juvenile Justice, 2009). In 2008, within Snohomish County, there were 1,954 delinquency petitions filed out of an estimated 77,200 youth age 10-17 years old (OJJDP, 2008).

Inhabitants of Snohomish County are distributed throughout 2,087 square miles between Puget Sound and the Cascade Mountains (QuickFacts, 2012). In 2010, Snohomish County had an estimated population of 713,335 residents and the populace was made up of 78.4% White, 8.9% Asian, 9.0% Hispanic or Latino origin, 4.6% two or more races, 3.8 % Some Other Race, 2.5% Black, 1.4% American Indian and Alaska Native persons, and 0.4% Native Hawaiian and other Pacific Islander persons (U.S. Census Bureau, 2010). According to Puzzanchera (2013), 13.1% of all arrests (2,673 total arrests and 3,441 per 100,000 youth) in Snohomish County were of youth age 10-17 years old in 2010. Snohomish County's arrest rate was 30% lower than the national average of 4,889 per 100,000 youth during that same year (Puzzanchera, 2013). In 2010, Snohomish County Juvenile Court had a total of 1,405 juvenile offender case filings,

which included 332 felony cases and 1,073 misdemeanor/gross misdemeanor offenses (Washington Courts, 2013).

Juveniles who engage in drug and alcohol use are at increased risk for criminal behavior with 60-85% of youth within the criminal justice population diagnosed with substance use disorders (Barnoski, 2004). While drug and alcohol abuse affects a significant proportion of juvenile offenders, evidence suggests that offering strength-based community mentoring programs can reduce the frequency of drug/alcohol relapse. A 2010 meta-analysis revealed that mentoring programs had the second largest positive effect on recidivism reduction among eight generic program types, although all of the programs showed positive effects (Lipsey, 2010). Rigorous program evaluation of mentoring programs needs to be completed to establish best-practices and evidence-based interventions designed to address substance abuse issues within the juvenile justice population. The Washington Association of Juvenile Court Administrators has also supported this rationale; "Additional research-proven programs are needed for other groups of moderate to high-risk youth, programs for non-aggressive youth from stronger families, and programs for youth with an alcohol/drug problem" (Barnoski, 2004, p. 4). With limited resources available to juvenile justice agencies, efficient use of program funding is necessary as is accountability of funds. This makes the study of newly developed community-based mentoring programs a critical endeavor. As Greenwood (2008) describes when referring to juvenile offender interventions, "Programs can no longer be promoted for wide-scale dissemination until they have been proven effective by a rigorous evaluation" (p. 206).

One such program in need of evaluation is the PAIR program, a community-based mentoring program currently underway in Snohomish County. As a pilot intervention strategy that began in October 2011, PAIR was established to provide strength-based mentoring opportunities to court involved youth diagnosed with a substance abuse problem. Snohomish County Juvenile Court received a grant from the Robert Wood Johnson Foundation in 2010 to implement the Reclaiming Futures model in an effort to improve the coordinated response of juvenile justice, substance abuse agencies, and the community (Hefley, 2010). The Reclaiming Futures model focuses on providing better substance abuse screening and assessment, along with service coordination in the community that promotes pro-social activities (Reclaiming Futures, 2012). A 2007 program evaluation report indicated the Reclaiming Futures model, "…is a potentially effective method for improving a community's response to delinquency and substance abuse" (Butts, 2007, p. 25). The Butts (2007) Reclaiming Futures evaluation was based on repeated surveys of stakeholders within the program sites from 2003-2006 although the evaluation did not include client-based data (p. 3). The judges, probation counselors, substance abuse providers and members of the local community have been working together under the Reclaiming Futures model since 2011 in an effort to better serve juvenile justice involved youth in Snohomish County.

Best-practices within the juvenile justice system of Washington State and nationally require the adoption of empirically based risk and needs assessments focusing on the static and dynamic risk and protective factors of juvenile offenders. Matching the appropriate intervention to each individual youth's criminogenic needs, as identified through a risk and needs assessment, is important in evaluating and designing drug abuse

prevention strategies (Hawkins, 1992; Hoge, 2008; Vincent, 2012). Dynamic risk factors for juvenile offenders include those areas of a youth's life that are changeable, including; current relationships, family dynamics, current drug/alcohol use, aggression, social skills, attitudes and behaviors, and others (Barnoski, 2004). Static risk factors for juvenile offenders are those factors that cannot be changed, including; criminal history, past drug/alcohol use, history of running away, prior expulsions and suspensions from school, mental health diagnosis, and more (Barnoski, 2004). Juvenile justice providers must concentrate efforts and resources on influencing changes to the dynamic risk and protective factors of juvenile justice populations.

Risk and needs assessments are delivered with fidelity when intensive training and support are provided to probation counselors that administer the evaluation tool (Vincent, 2012; Hoge, 2008). In 1998, Washington State courts, including Snohomish County, adopted an empirically based risk needs assessment developed at the Washington State Institute for Public Policy called the Washington State Juvenile Court Assessment (WSJCA). This locally developed tool has been modified over the years and adopted by courts througout the United States. The current interation of the assessment instrument, provided by Assessments.com, is called the Positive Achievment Change Tool (PACT) (Assessments.com, 2013). The PACT was developed from the latest research on the correlates and causes of criminality in juvenile offenders (Hoge, 2008).

Juveniles receiving probation services in Snohomish County and Washington State are assessed using the PACT assessment tool. The PACT contains 126 items of measurement within 12 domains correlated to juvenile delinquency. The assessment tool has an established statewide juvenile Assessment Quality Assurance Committee and full

time qualtiy assurance specialist, as well as on-going training and monitoring administrative support in order to ensure assessment reliability (Barnoski, 2009). This quality assurance component has implications for juvenile court interventions, as well as the inter-rater reliability of the PACT (Barnoski, 2004). By ensuring probation counselors in Washington State are properly trained, youth are referred to interventions that match their criminogenic needs as identified by the PACT. In addition, the quality assurance component allows courts to identify and implement appropriate interventions within their jurisdictions, matching the needs of the local juvenile offender populations, while utilizing the assessment tool to evaluate intervention effects on juvenile offender populations over time (Vincent, 2012).

The results of a 2012 PACT query indicated a significant proportion of juvenile offenders assessed in Snohomish County during the first six months of 2011 had room for improvement in substance abuse related dynamic risk and protective factors (see Appendix A). The PACT query results also revealed a substantial need for mentoring opportunities amongst Snohomish County probation involved youth. The PAIR program was established to meet the needs of juvenile court involved youth diagnosed with a substance abuse problem.

The PACT assessment's use of dynamic risk and protective factors as items of measurement in each domain is based on the work of Hawkins, Catalano and Miller (Barnoski, 2004). One protective factor supported by this research is youth having a good relationship with a significant adult that models pro-social skills and encourages engagement in positive activities (Barnoski, 2004; Hoge, 2008; Vincent, 2012). When youth feel that there are people in their community that encourage them to stay out of

trouble and are willing to help them, this is considered a protective factor. A recent review of the research on risk and protective factors relating to substance abuse in early adulthood also suggests neighborhood instability may increase risk of alcohol and marijuana use in young adults (Hawkins, 1992; Stone, 2012). Hawkins et al developed a drug abuse prevention model suggests that when designing interventions to reduce the negative effects of risk factors, it is important to look at the potential positive effects of protective factors (Hawkins, 1992). Protective factors are social, behavioral and environmental influences that can be added to a youth's life experiences, serving as resources to shield them from substance abuse relapse.

The inclusion of risk factors in the PACT assessment as a predictor for substance abuse issues and criminal behavior by youth has also been validated by research of Hawkins et al (Barnoski, 2004). Most studies show that more than half of girls and boys involved in the juvenile justice system have a substance abuse problem (Hoge, 2008). The results of a Snohomish County 2011 PACT query mirror Hoge's findings with 51% of youth placed on formal probation reporting a diagnosed substance abuse problem at the initial PACT assessment while more than 75% indicated current drug and/or alcohol use (See Appendix A, Items 8 and 9). These results suggest that one in four youth placed on probation within Snohomish County during this time period could benefit from further drug/alcohol assessment. A recent review of the literature that examines the evidence for longitudinal predictors of substance abuse in young adults concludes that early adolescent drug or alcohol use increases the likelihood of an individual using the same substance in young adulthood as well as increasing the chances of other substance use (Stone, 2012).

Risk factors are social, behavioral and environmental factors that contribute to potential substance abuse problems in youth.

Although there is limited research on the impact of personal relationships between group leaders and their mentees as a stand-alone intervention, there is evidence that high quality interaction between leaders and youth participants within group settings can have positive effects on pro-social adjustment (Denault, 2008). It is the closeness and longevity of the mentor relationship that tends to contribute the most toward program efficacy (Dubois, 2002). Study findings also suggest that successful art programs strive to increase youth self-esteem and intentionally involve the community in which the youth live (Farnum, 1998). As evidence continues to show that mentoring programs have positive results, significant funding opportunities for these interventions are employed, with 97 million dollars in federal funding for these program types in 2010 alone (Office of Justice Programs, 2011).

Lipsey's meta-analysis of effective programs showed that mentoring was second only to group counseling, among the effective generic program types within the counseling category (Lipsey, 2010). The form of meta-analysis performed by Lipsey and Dubois is considered to be the best way to determine program effectiveness (Greenwood, 2008). Although there is a considerable amount of research, including meta-analysis on 1:1 mentoring programs, it is group mentoring similar to what is offered within the PAIR program, that needs further study (Baldwin Grossman, 1997; Deutsch, 2009; Keating, 2002; Wilson, 2000; Rhodes, 2000; Dubois, 2002; Farnum, 1998; Jones-Brown, 1997; Griffin, 2005).

In addition to providing the PAIR participants with a positive adult role model, the intervention seeks to increase the youth's sense of attachment to their community through pro-social activities (Reclaiming Futures, 2012; Butts, 2007). Again, research suggests that pro-social community activity participation can help at-risk youth prevent the development of substance abuse symptoms (Buu, 2009). The establishment of an excellent mentor/child relationship within a pro-social community activity can protect youth from risky behaviors such as drug and alcohol use (Dubois, 2002). This study seeks to provide insight as to the effectiveness of the PAIR program in establishing positive adult relationships within a pro-social activity for youth diagnosed chemically dependent.

PAIR Intervention:

PAIR youth are often involved in multiple interventions before, during and following their involvement in the workshop series, and there is evidence to suggest that a comprehensive risk-focused approach incorporating multiple programs that address various risk factors can be effective in preventing drug abuse (Hawkins, 1992). The PAIR program seeks to enhance protective factors and address specific risk areas as an adjunct, not a replacement for, Snohomish County interventions such as substance abuse treatment, Aggression Replacement Training, Functional Family Therapy, Juvenile Drug Court and others. It is this combination of interventions, "…promoting consistent prevention principles across units of socialization" (Hawkins, 1992, p. 96), that have shown positive effects on youth in relation to substance abuse prevention.

PAIR eligible youth are Snohomish County probation involved youth that have a chemical dependency diagnosis, and youth do not have to pay to participate as funding is

provided by the Blanche Miller Trust Fund. The PAIR program consists of 7-9 consecutive workshop sessions and the workshops are offered several times throughout the year. The juveniles meet with the workshop artist/artists, the program coordinator and other mentors (judge, probation counselor and educator) for two hours each Tuesday afternoon. The PAIR intervention is held in the community and away from the courthouse complex. The pilot program finished it's fifth workshop series in early 2013 with additional workshops planned and funded for 2013 and 2014. Thus far, youth have engaged in PAIR workshops with the following themes; Creative Writing & Glass Art, Mixed Media (Altered Books), Photography and Calligraphy. The community artists are vetted and chosen by the PAIR Program Coordinator, and they come with a variety of backgrounds and a passion for working with youth.

Purpose of the Study:

Given the above evidence derived from the PAIR program evaluation and the PACT assessment results, this study will help answer the following research questions: (1) Does PAIR significantly increase protective factors in juvenile justice involved youth within Snohomish County as measured by the following PACT questions, including, current interest and involvement in pro-social activities, number of positive adult non-family relationships, and pro-social community ties?; (2) Does PAIR significantly decrease risk factors in juvenile justice involved youth within Snohomish County, including, current alcohol use and current drug use as measured by the PACT? And; (3) Does the PAIR program provide opportunities for Snohomish County's chemically dependent juvenile justice population to build pro-social relationships with community artists? Additional data will be collected on gender and the number of workshop sessions

attended by each participant, allowing for the analysis of dosage effect on the study population.

Research question one intends to understand whether there is a relationship between the PAIR program and participant interest and involvement in pro-social activities, positive adult non-family relationships and pro-social community ties. The null hypothesis for question one is, the Promising Artists in Recovery Program has no effect on youth participant current interest and involvement in pro-social activities, positive adult non-family relationships, and pro-social community ties. Appendix B, Part A, contains a complete list of PACT risk needs assessment questions, and the corresponding list of responses, used to answer question one.

Research question two intends to answer whether PAIR significantly decreases risk factors in the juvenile justice involved youth within Snohomish County, including, current alcohol use and current drug use. The null hypothesis for question two is, the Promising Artists in Recovery Program has no effect on youth participant current use of drugs and/or alcohol. Appendix B, Part B, contains a complete list of PACT risk needs assessment questions, and the corresponding response options, used to answer question two.

Research question three intends to answer whether the PAIR program accomplishes its goal of providing opportunities for Snohomish County's chemically dependent juvenile justice population to build pro-social relationships with community artists. The null hypothesis for question three is, the Promising Artists in Recovery Program does not provide Snohomish County's chemically dependent juvenile justice involved youth with opportunities to build pro-social relationships with community

artists. The youth answers to the participant survey questions and interviews with program stakeholders will help to answer question three. Appendix C contains a complete list of the youth survey questions and the corresponding list of answers.

The purpose of this study is to explore the effects of the PAIR program on youth referred to the intervention. An *impact evaluation* was used to determine whether the PAIR program is having an effect on the youth participants due to it's benefit in, "…that it is suited to the needs of both program-level managers and policy designers, for it is important for both to ascertain whether target populations are appropriately receiving delivery of a program" (Theodoulou, 2004, p. 194). According to Theodoulou (2004), the results of the policy analysis enables program deliverers to modify the intervention to better achieve the stated goals, including identification of the following; the theoretical and actual goals of the PAIR program, program objectives and results, as well as the unintended, intended, positive or negative effects. Through the impact evaluation process, PAIR program providers can improve the quality and effectiveness of the stated goals of the intervention.

It is unlikely the research questions for this study can be best resolved by a strictly qualitative or quantitative method alone so a mixed-method research design was employed. Establishing causality from the application of the Wilcoxon Singed Rank Test, McNemar's Test and bivariate Spearman's correlation alone would be problematic at best, with many of the PAIR participants receiving multiple interventions while on community supervision. Most youth receive one or more additional services while attending the PAIR workshops. The following comprises a partial list of research-based and best-practice programing that juvenile court involved youth participate in while on

community supervision; Case Management Assessment Process, Aggression Replacement Training, Functional Family Therapy, Coordination of Services (Cocoon House WayOUT Program), various substance abuse treatment therapies and specialized education and/or job training (Snohomish County Juvenile Court, 2013; Washington State Institute for Public Policy, 2013). As Fitzpatrick et al (2011) stated:

> "Our recommendations are not for a type of method, but for choices that make sense for the evaluation questions to be answered and the context of the study. Typically, these are mixed methods because few questions can be answered by only one strategy" (p. 384).

CHAPTER 2

Chapter 2-Review of Literature:

A useful book entitled *Treating the Juvenile Offender* discusses the importance of implementing and studying the effectiveness of juvenile justice programs and jurisdictional utilization of dynamic risk and protective factor theory (Hoge, 2008). The book describes the importance of validated risk assessments as well as matching the appropriate intervention to the individual youth's criminogenic needs. The PAIR program is utilizing Washington State's empirically based risk assessment, an assessment tool that was mentioned in this publication, to measure the effectiveness of the intervention.

The Center for Juvenile Justice Reform studied the effectiveness of the Standardized Program Evaluation Protocol (SPEP) (Lipsey, 2010). The study used meta-analysis, "The technique for extracting and analyzing information about intervention effects and the characteristics of the interventions producing those effects from a body of qualifying research…" (Lipsey, 2010, p. 20). Lipsey concluded through meta-analysis that mentoring programs are effective interventions for adolescent offender populations like Snohomish County's juvenile justice involved youth.

Another relevant study from the Office of Juvenile Justice and Delinquency Prevention provides statistical information on the extent of the juvenile crime problem and trends over time. The most recent reports and data show delinquency has decreased over the past decade and Snohomish County's crime rate is well below the national average (Puzzanchera, 2012; Puzzanchera, 2013). Data for the 2012 report was retrieved from the National Juvenile Court Data Archive and both sources include data submitted by juvenile justice jurisdictions from across the United States.

A handbook entitled, "YouthARTS Arts Programs for Youth at Risk: the Handbook", is a 217 page guide to developing arts programs for youth considered to be at-risk (Farnum, 1998). The publication studied the effects of three art agency programs on Oregon's youth population. The researchers used an outcome evaluation that relied on multiple data sources to measure attendance, youth benefits and changes in risk factors of youth participants. The YouthARTS program concluded that intervention participants made improvements in social skills and engaged in less delinquent behavior post intervention. Another research journal article entitled, "The Effects of Cultural Arts Programs on At-Risk Youth", included an evaluation of five separate youth art programs including the YouthARTS program (Rapp-Paglicci, 2007). A longitudinal study, "The Arts and Achievement in At-Risk Youth: Findings from Four Longitudinal Studies", revealed promising results correlated to the positive educational achievement of at-risk youth engaged in arts programming (Catterall, 2012). The youth art programs identified in these studies are similar to the PAIR program in many respects.

The Robert Wood Johnson Foundation, Reclaiming Futures model program has been studied and promising results were published in 2007. The Reclaiming Futures program evaluation report, "Changing Systems: Outcomes from the RWJF Reclaiming Futures Initiative on Juvenile Justice and Substance Abuse", provides a comprehensive overview of the model's outcomes and significant findings from the program deliverer perspective (Butts, 2007). The study involved ten different communities across the United States and the findings revealed system improvements in twelve of thirteen indices including; Pro-social Activities for Youth, Data Sharing, Treatment Effectiveness, Assessment, Agency Collaboration, Availability of Client Information, Resource

Management, Cultural Integration, Access to Services, Targeted Treatment, Alcohol and Other Drugs Assessment, and Family Involvement. The only area not showing a statistically significant change was Partner Involvement and this area was rated the highest from the beginning and consequently did not have very much room for improvement from the outset. The Butts (2007) report provides insight into the model responsible for the development of the PAIR program.

To provide historical perspective, "Promises and Pitfalls of Mentoring As a Juvenile Justice Strategy" is reviewed (Jones-Brown, 1997). Written nearly fifteen years ago, this paper discusses the promise of the Juvenile Mentoring Program (JUMP) and C.O.R.E. mentoring programs. An OJJDP bulletin and November 2000 report outlines the federal government's rational for supporting mentoring programs and summarizes the JUMP program and private public venture mentoring research (Baldwin Grossman, 1997; Wilson, 2000). JUMP was developed to provide mentoring opportunities to at-risk youth as a way to reduce delinquency and improve school achievement. The reports indicate that positive relationships between young people and mentors can be developed through structured programs. This promising approach to addressing juvenile delinquency was hailed as a better way to deal with at-risk youth following the failed 'get tough' juvenile justice policies of the 1990s.

The Office of Justice Programs fact sheet from the US Department of Justice describes federal government sponsored mentoring work being done as of November 2011 (Office of Justice Programs, 2011). The US Department of Justice (2011) bulletin describes mentoring as, "…crucial for individuals who are attempting to reenter the community, especially if the person was processed as a young adult" (p. 1). An

evaluation of Big Brothers/Big Sisters, "Agents of Change: Pathways through Which Mentoring Relationships Influence Adolescents' Academic Adjustment", showed significant improvement in scholastic achievement in program youth (Rhodes, 2000). This report adds to other research showing positive effects of mentoring programs on youth outcomes.

The Keating mentor study showed significant changes from pre-intervention to post-intervention on four of seven variables, where the control group studied did not (Keating, 2002). A significant reduction in internalizing and externalizing behaviors, as reported by teachers and mothers, were also reported. A 2009 journal article that discusses the importance of developing a mentoring program that employs best-practices was reviewed (Deutsch, 2009). The report describes the importance of duration, connection, frequency of contact, consistency of contact, and mentor approach as being important measures of the quality of a specific mentoring intervention. The study recommended that dosage (level of exposure) be included as a measure in evaluating a mentoring program.

Greenwood authored a journal article on the importance of utilizing proven juvenile justice intervention programs as well as conducting research on new programs (Greenwood, 2008). Although there are best-practices and evidence-based programs to address juvenile delinquency, only 5% of youth considered appropriate candidates for these interventions are given an opportunity to participate. The report emphasizes the importance of evaluating programs prior to implementing them on a large scale so as to avoid doing harm in addition to utilizing limited resources effectively.

Griffin wrote a journal article that describes the Building Resiliency and Vocational Excellence program (BRAVE), a substance abuse and violence prevention program. The intervention included elements of mentoring as part of its Resiliency Networking. The program also incorporates what it called, "The five best-practice characteristics for mentoring" (Griffin, 2005, p. 81). The report emphasizes the importance of addressing appropriate risk factors for the target population and utilizing a strength-based approach.

A 2006 Corporation for National and Community Service publication provides analysis of the Current Population Survey (CPS) to increase understanding around the demographic, socioeconomic or other factors that show differences in those people that volunteer to be youth mentors (Foster-Bey, 2006). This report can help stakeholders in understanding the characteristics of those individuals that are more likely to volunteer to be a mentor.

The Washington State Juvenile Court Assessment Manual provides the background and origin for the PACT risk assessment (Barnoski, 2004). The risk needs assessment is a tool to assist Washington State juvenile justice agencies in providing appropriate interventions to local offender populations. The manual also assists assessment tool users in implementing the evaluation tool with fidelity. The guidebook, *Risk Assessment in Juvenile Justice: A Guidebook for Implementation*, offers additional insight into risk assessments and the importance of addressing dynamic risk and protective factors of youth engaged in the juvenile justice system (Vincent, 2012). The guidebook also suggests that risk assessments can be used to provide stakeholders with valuable data on intervention effectiveness.

Secondary data to evaluate the need for the PAIR mentoring program was collected in Snohomish County through a PACT query in 2011, 2012 and again in 2013. The data from needs assessments was utilized to determine the need for this type of program. Utilizing assessment data can, "…aid agency administrators in evaluating resource availability throughout the jurisdiction and determining program gaps that need to be filled" (Lipsey, 2010, p. 41). The PACT query covering initial risk assessments from January 6, 2011 to July 6, 2011 indicated 277 youth received assessments during the six-month period. Of the assessed youth, only 15% were involved in one or more structured and supervised pro-social community activities, while 50% of responding youth reported they have no positive adult non-family relationships. In addition, only 2% (6 out of 277 youth) stated they have strong pro-social community ties. The 2011 PACT query revealed important findings related to drug and alcohol use with Snohomish County's probation involved youth. The results showed 75% of respondents were currently using drugs or alcohol at the time of the assessment. According to the PACT data, 49% of youth reported past use of alcohol caused family conflict, while 57% indicated drug use interfered with keeping pro-social friends. Of the 277 juvenile court involved youth assessed, 51% were diagnosed abuse or dependent/addicted, 47% never received a drug/alcohol assessment and only 2% of all youth were diagnosed as no problem with drug/alcohol use. This query was an important step in identifying the need and rationale for the conception and implementation of the PAIR program. The PACT data revealed a significant need for Snohomish County's juvenile justice stakeholders and policy makers to address chemical dependency issues and the lack of pro-social activities of probation involved youth.

The work of Hawkins et al discusses the importance of addressing both risk and protective factors within interventions designed to address drug abuse. Specifically, they recommend interventions should be developed that take into account the empirical evidence around risk and protective factors (Hawkins, 1992). The Hawkins et al (1992) study indicates at-risk youth should be treated through the utilization of a variety of interventions targeted at various, "…units of socialization" (p. 96). It is vital for juvenile justice agencies and policy makers to focus on the implementation of carefully designed programs addressing salient risk and protective factors of at-risk youth populations. In addition, the work of Stone et al provides meta-analysis on risk and protective factors and their effects on early adolescent substance use (Stone, 2012). Stone et al is a recent study adding to the research of Hawkins et al, concluding that additional longitudinal and non-college attending young adult studies are needed in this area. The report provides further evidence of the influence of risk and protective factors on adolescent, as well as subsequent adult, substance abuse disorders.

Crime statistics from the Office of Juvenile Justice and Delinquency Prevention and the National Center for Juvenile Justice are used to measure the extent of the problem and cover the years 1995 to 2009. These crime statistics allow researchers to consider juvenile crime rates and juvenile justice response trends over time. Historical data that covers incarceration, probation, parole, demographics, judicial waiver, referral source, juvenile court case processing and offense category are explored to give a sense of the problem facing juvenile justice practitioners. Suggestions for improving juvenile justice program effectiveness by utilizing and evaluating best-practices in mentoring programs, as presented by the Center for Juvenile Justice Reform are also examined (Lipsey, 2010).

CHAPTER 3

Chapter 3-Methodology:

Experimental Group:

The experimental group consists of Snohomish County juvenile court-involved youth diagnosed with a substance abuse problem and included At-risk Drug Court, Probation and Offender Drug Court youth. Some youth were referred to PAIR multiple times since the program began in October 2011. Participants volunteer for the PAIR program (limitations of this study include self-selection bias as a result of not utilizing random assignment) and their assigned probation counselor or the Drug Court program refers youth to the intervention. The experimental group included a total of 37 individual youth referred, with 10 of those youth being referred to PAIR two or more times resulting in 54 total youth referrals (see Table 1). The highest attended workshop had 12 participants while the smallest cohort included 7 participants. A total of 30 youth attended the PAIR program, with 8 of the 30 youth participating in two or more workshops during the pilot study period.

The PAIR participants are encouraged to maintain contact with the artists and mentors in the community through texting, interactions at the courthouse and taking part in opportunities for additional community art projects as they present themselves. Beyond the workshop sessions, youth participants had further contact with artists and pro-social community members through art shows and exhibits, individual commissioned creative arts opportunities, teen art programming and classes, panel participation in a Juvenile Justice Conference, supplemental glassblowing workshops and multiple PAIR program participation.

Control Group:

A control group was not included in this study. The control group that was initially identified included probation-involved youth diagnosed with a substance abuse problem that don't participate in PAIR, however, the data could not be used. The control group was drawn from youth receiving an initial PACT assessment during the same time period as the PAIR involved youth, but there were significant differences in the length of time between assessment and re-assessment as well as differences in gender. There were substantial differences in the PAIR population's make up as well, with a larger proportion of Drug Court youth in the experimental group, making the use of the control group in any analysis and results problematic at best. Gender differences between the experimental group and the larger Snohomish County juvenile justice population will be discussed later on in this report.

Design and Materials:

The PAIR program evaluation included participant surveys, pre and post intervention PACT risk assessments, stakeholder interviews and direct observation. This study was formulated as a mixed-methods design utilizing descriptive statistics, Wilcoxon Signed Rank Test, McNemar's Test, bivariate Spearman's correlations and qualitative data. This method was used in an attempt to determine whether the PAIR intervention significantly impacted previously mentioned youth participant risk and protective factors. The design was also chosen because random assignment was not possible, as a tenant of the PAIR program is to have eligible youth volunteer to participate and a suitable comparison group could not be established. The mixed-methods design of this study was preferred in an effort to enhance the evaluation results and the program provider's understanding of the PAIR intervention (Fitzpatrick, 2011).

Through the combined analysis of PAIR participant surveys, PACT assessment results and program deliverer's perception of the interventions effectiveness, the strength of the findings is enhanced. A mixed-methods approach is utilized to triangulate the measures and, "…thus, increase the validity of (our) measurement of the construct" (Fitzpatrick, 2011). The mixed-methods approach is deemed more effective when dealing with what J. C. Green calls *contemporary social inquiry* and the critical issues that comprise such studies (Greene, 2012). Critical issues cited by Greene (2012) include:

- *the complex character of human phenomena,*
- *the location of context in human action,*
- *the role of values in social inquiry, and*
- *the role of inquiry in society* (p. 758)

Interviews were conducted with artist mentors, the PAIR Coordinator, the Juvenile Drug Court Judge and other stakeholders to add additional insight beyond the PACT and participant survey data. The mixed-methods approach is recommended when conducting mentoring evaluation and Deutch (2009) recommends quality program appraisals include; focus groups, direct observation, logs and participant check-in, administrative records, surveys and interviews (pp. 62-63).

Measures:

Utilizing the PACT risk assessment, the dependent variables in this study are three protective factors (all ordinal) and two risk factors (both categorical) related to juvenile offender behaviors. Again, these dependent variables include participant interest and involvement in pro-social structured recreational activities, number of positive adult

non-family relationships, pro-social community ties, current drug use and current alcohol use. Independent variables include the participant's age, gender and the number of PAIR sessions attended.

To evaluate research question one and two a Wilcoxon Singed Rank Test and McNemar's Test was conducted to evaluate the impact of the intervention on PAIR participant scores in the risk and protective factors (dependent variables) included in the PACT. The bivariate Spearman's correlation analysis was also used to help describe the relationship of PAIR attendance and these identified risk and protective factors. The PAIR program will be further evaluated using the PACT assessment results and descriptive statistics from participant surveys. The youth's assigned probation counselor administered a PACT assessment to the youth participant within 90 days of the start of the PAIR workshop (independent variable). Following the youth's completion of the PAIR program, the same probation counselor completed a follow-up PACT assessment within 30 days following the final workshop session.

A participant survey was developed and administered at the conclusion of the last two PAIR workshops. The analysis of the participant survey responses will be descriptive for each item. Bivariate Spearman's correlation analysis was employed to describe the strength and direction of the relationship between youth attendance and the youth perception of programs effects as reported in the survey. The last two questions on the survey are related to youth participant suggestions for changes in the workshops and art mediums that interest them. The survey questions are also used to validate the PACT risk assessment information gathered, as well as evaluate the third research question.

In order to analyze question three the Wilcoxon Signed Rank Test and McNemar's Test will be informative, and the post intervention youth survey can be used to validate the PACT assessment results. The participant survey was developed because currently the Juvenile Probation Counselor is reporting on data from question one and two, and in order to determine if there is a more parsimonious relationship, the participant survey was created to solicit youth responses to these questions as well. The survey was developed in mid 2012 and administered to the two final PAIR workshop cohorts.

Observations can also tell us whether specific activities occur that may enhance the effectiveness of the intervention. To gain additional insight beyond the Wilcoxon Signed Rank Test, McNemar's Test and bivariate Spearman's correlation analysis, additional descriptive statistical examination of the PAIR program was also conducted. As mentioned earlier, the program does not allow for random assignment, as a tenant of the workshops is to have youth 'volunteer' to attend the intervention leading to self-selection bias, a limitation that will be noted in the findings. The study design collected PACT data from the entire participant population, as the program group is small (38 individual youth referred to one or more workshops from October 2011 to January 2013). The surveys were distributed to 19 participants at the conclusion of the last two PAIR programs (see Appendix C for a sample survey questionnaire and a complete list of the survey questions and response categories). The evaluator conducted interviews with youth, program deliverers and probation counselors to elicit stakeholder interpretation and exploration of program effectiveness. This additional qualitative information provides the context for consideration of the intervention and its outcomes from the stakeholder perspective.

From the participant survey, the dependent variables in this study are ten measures related to the youth's motivation to abstain from drug/alcohol use, youth feelings toward the PAIR program and mentors, and youth feelings toward their community. These dependent variables include participant perception of the PAIR Coordinator's enthusiasm, PAIR artist enthusiasm, youth connection to their community, number of positive encouraging adults, interest and involvement in pro-social community activities, perceived support from the community, attachment to the community in which they live, and motivation to abstain from drug use and motivation to abstain from alcohol use (see Appendix C for a sample survey and complete list of questions and response categories). Independent variables include the participant age at the time of PAIR orientation, gender and the number of PAIR sessions attended.

Key stakeholders will be involved in the interpretation of the data to facilitate the practical use of results while also adding validity to the conclusions. The initial purpose of the evaluation will be formative rather than summative, with the evaluation resulting in program improvement and promoting new ways of thinking through the evaluation process. Beyond this study, recidivism data may be extracted using the Washington State Juvenile Correction Database custom BOXI reports providing re-offense rates of program youth.

The study took place in Snohomish County, Washington and utilized the Positive Achievement Change Tool (PACT), an Assessments.com risk needs assessment to measure changes in risk and protective factors. Additional measures included post intervention participant surveys, direct observation and stakeholder interviews. Survey measures included youth perception of positive adults in their lives, pro-social

community activities, positive attachment to their community, and motivation to abstain from drug and alcohol use. The Wilcoxon Signed Rank Test will tell us whether or not there were significant differences in the youth protective factors following the PAIR intervention. The McNemar's Test will tell us whether or not there were significant differences in youth participant drug or alcohol use following the PAIR intervention. Surveys in conjunction with direct observation and stakeholder interviews will also tell us whether or not youth participants developed positive relationships with program providers.

Data Collection Procedures:

Post-participant surveys were administered to the last two cohorts of youth following their completion and within 30 days of the final PAIR workshop (n=19). Careful consideration of the sequencing of the survey questions was made, and questions are clear and worded correctly while also being structured to elicit cooperation (Fink, 2009). Special attention was also directed at the wording and order of the survey questions in an effort to eliminate bias and promote respondent participation. Development of a unique twelve question survey was completed, as existing surveys did not address this specific program evaluation. The first ten questions relate to the PACT assessment risk and protective factors and were developed using a five point Likert-scale. The final two survey questions were tailored in a way to elicit participant responses and determine whether program changes need to be made, as well as gather feedback on the perception of what the best elements of the program are.

The youth survey questions are also used to validate the PACT assessment information gathered. The post intervention survey was distributed, explained and then

collected from the youth participants by this researcher. The youth participant's Juvenile Probation Counselor conducted pre and post intervention PACT assessments (n=47). The initial PACT assessment interview was completed within 90 days of the intervention start date and the data was then entered into the Assessments.com data warehouse. No more than 30 days following the final PAIR workshop, the Juvenile Probation Counselor completed another PACT assessment with the youth and entered the data into Assessments.com.

The author of this report entered the pre and post intervention PACT data and the post intervention survey data into Microsoft Excel. The random assignment of identification numbers to youth participants was completed in Excel and the data was cleaned prior to being transferred to the Statistical Package for the Social Sciences (SPSS) by the author of this report. Within SPSS the variables were then categorized for analysis.

The author of this study also conducted informal interviews with key stakeholders (i.e. youth participants, probation counselors, artists, PAIR Coordinator, and a Superior Court Judge). Direct observation of the PAIR intervention has been ongoing over the past 18 months and information has been recorded in a chronological log. Recorded interviews were conducted with PAIR artists, a Superior Court Judge and the PAIR Coordinator to solicit feedback from the program deliverers/stakeholders. To further validate study findings, the chronological log and recorded stakeholder interviews were reviewed to determine the perceived influence of the intervention on dynamic risk and protective factors.

Analysis Strategy:

Statistical Package for the Social Sciences (SPSS) was used to analyze the relationship between the study variables. Again, analysis includes five measures of PACT risk and protective factors and ten measures of participant perception of the PAIR program. Using appropriate frequencies, I computed descriptive statistics on the population as calculated percentages of survey responses, changes in risk/protective factor scores by gender and PAIR sessions attended.

Interviews with the PAIR artists, PAIR Coordinator and Juvenile Drug Court Judge all reported their experiences with the intervention in recorded interviews. The program deliverers were interviewed to provide additional qualitative information, adding to the PACT assessment and post-PAIR survey analysis.

For research questions one and two, bivariate correlation using Spearman's Rank Order Correlation was used to determine whether there was a relationship with PAIR program participation and PACT risk and protective factors. It was expected that protective factor scores would be strengthened as youth attendance in the PAIR program increased, and it was expected that risk factors would decrease as youth attendance in the intervention increased.

A Wilcoxon Signed Rank Test was used to measure median PACT protective factor scores of PAIR participants on two different occasions (pre and post PAIR intervention). The McNemar's Test was used to compare the proportion of youth who reported drug use or alcohol use prior to and following the PAIR program. Analysis includes assessment of each participant's risk and protective factors at time one (within 90 days of the start of the intervention) and time two (within 30 days of the final PAIR session) by the youth's assigned probation counselor. A Wilcoxon Signed Rank Test was

used to evaluate the impact of the PAIR program on participant interest and involvement in pro-social structured recreational activities, positive adult non-family relationships, pro-social community ties, while the McNemar's Test was used to evaluate the impact of the program on current drug use and current alcohol use.

For research question three, bivariate correlation using Spearman's Rank Order Correlation was used to determine whether there was a relationship with PAIR program participation and post intervention participant feelings toward their community, perception of artist and coordinator enthusiasm, interest and involvement in positive activities, and motivation to abstain from drug and alcohol use. Analysis of the survey responses, PACT scores and stakeholder observations are also interpreted collectively so as to validate the results through triangulation.

Ethical Considerations:

This project included the study of human subjects and the protection of their rights was considered paramount. The PAIR program was funded by a grant from the Blanche Miller Trust and an internal review was conducted with Snohomish County management, court administration, program deliverers and representatives from the Miller Trust Board prior to the study taking place. Care was taken to ensure that the confidential information and anonymity of individual youth was maintained during the data collection of assessments, surveys and interviews. Confidentiality and anonymity was preserved, by assigning random I.D. numbers to each participant prior to the data entry into SPSS and subsequent analysis. Care was taken so the identity of the people providing the information will not be linked to any of the individual data included in the study nor disclosed to others. The subject's participation in the study was voluntary and

program participants were not required to participate in the research activities as a caveat to PAIR program involvement.

Informed consent was obtained from program deliverers (Judge, PAIR Coordinator and artists) participating in the case study recorded interviews and data collection, as the anonymity of the personal interview data and the quotes included in the study could not be ensured. The University of Washington IRB application was considered and a waiver was granted.

CHAPTER 4

Chapter 4-Results and Discussion:

There were a total of 47 pre intervention and post intervention PACT assessments completed by the participant's Juvenile Probation Counselor. Youth attended an average of 4.19 PAIR sessions per workshop over the entire study. There were a total of 19 youth that participated in the post PAIR survey, with these youth attending an average of 6.11 sessions per workshop over the final two workshops.

Demographics:

This study draws on merged data from youth referred to the PAIR intervention. The participant ages varied from 14 to 19 years old (see Table 2). A total of 37 individuals were referred to the study, but with many youth being referred to the program multiple times there were 35 females and 19 males referred over time (see Table 3).

There was a significant difference in the gender of the study population as compared to the general juvenile offender population of Snohomish County. Among all respondents in the study group, 65% of referred youth were female and 35% were male (see Figure 1). In contrast, a PACT query revealed that, among 671 offender youth assessed between September 2011 and January 2013, 26% were females and 74% were males (see Figure 2). The mean age of the participants referred to the program was 16 years old; matching the average age of PACT assessed youth in Snohomish County (see Table 4).

Research Question 1:

Does PAIR significantly increase protective factors in juvenile justice involved youth within Snohomish County as measured by the following PACT questions, including, current interest and involvement in pro-social activities, number of positive

adult non-family relationships, and pro-social community ties? Results of the Wilcoxon Signed Rank Test analysis of PAIR participant PACT scores in pro-social activities, number of positive non-family adults and pro-social community ties are presented in Tables 5, 6 and 7. The Wilcoxon Signed Rank Test was conducted to evaluate the impact of the PAIR intervention on participant protective factor scores as measured by the PACT. The test revealed a statistically significant increase in youth interest and involvement in pro-social activities, $z = -3.407$, $p < .001$, with a medium effect size ($r = .35$) using Cohen (1988). The median PACT score increased from pre-PAIR (Md = 1) to post-PAIR (Md = 2). The results indicate that youth interest and involvement in pro-social activities was significantly higher following participation in the PAIR program.

The Wilcoxon Signed Rank Test also revealed a statistically significant increase in the number of positive adult relationships following youth participation in the PAIR program, $z = -3.346$, $p < .001$, with a medium effect size ($r = .35$) using Cohen (1988). The median PACT score increased from pre-PAIR (Md = 1) to post-PAIR (Md = 2). The results indicate that the number of pro-social adults was significantly higher following youth involvement in the PAIR program.

The Wilcoxon Signed Rank Test revealed no significant difference in youth pro-social community ties, $z = -1.667$, $p < .096$. The median PACT score remained (Md = 1) for youth at both pre and post-PAIR. The results indicate no significant differences in the participant's pro-social community ties.

Results of the bivariate Spearman's correlation analysis of PAIR participant attendance and post intervention PACT scores on youth involvement in pro-social activities, number of positive non-family adults, and pro-social community ties are

presented in Table 8. There is a weak positive correlation in the data set between the PAIR sessions attended and youth interest and involvement in pro-social activities as measured by the final PACT assessment (Spearman's $r = .223$, $n = 47$, $p < .13$), however the results did not reach significance at the $p < .05$ level. For number of PAIR sessions attended and the number of pro-social adult non-family relationships following the PAIR program, there is a moderate positive but significant correlation in the data set (Spearman's $r = .305$, $n = 47$, $p < .04$). Finally, there was a strong but significant positive correlation in the number of PAIR sessions attended and participant pro-social community ties (Spearman's $r = .546$, $n = 47$, $p < .01$). Therefore, we can report strong positive correlations in perceived pro-social community ties associated with increases in attendance in the PAIR program. We can also report moderate positive correlations in the number of pro-social adult relationships with increases in youth attendance in the PAIR program. There was not sufficient evidence to support a correlation between PAIR attendance and pro-social activity involvement among the study population.

Research Question 2:

Does PAIR significantly decrease risk factors in juvenile justice involved youth within Snohomish County, including, current alcohol use and current drug use as measured by the PACT? The McNemar's Test (see Table 9) conducted on participant alcohol use and revealed no significant change in participant alcohol use from time one to time two, as measured by the PACT, ($p < 1.000$). This suggests there was no significant change in the proportion of youth using alcohol following PAIR (34.0%) when compared with the proportion of participants using alcohol before PAIR (31.9%).

The McNemar's Test (see Table 10) was conducted on current drug use and revealed no significant change in participant drug use from time one to time two, as measured by the PACT, ($p < .454$). This suggests there was no significant change in the proportion of participants using drugs following PAIR (36.2%) when compared with the proportion of youth using drugs before PAIR (44.7%).

Results of the bivariate Spearman's correlation analysis of PAIR participant attendance and post intervention PACT scores on current drug use and current alcohol use are presented in Table 11. There was no correlation in the data set between the number of PAIR sessions attended by the respondent and the respondent's drug use as measured by the PACT assessment (Spearman's $r = -.03$, $n = 47$, $p < .83$), and the results did not reach significance at the $p < .05$ level. Also, there was a weak negative correlation in the data set between the PAIR sessions attended by the respondent and the respondent's alcohol use (Spearman's $r = -.13$, $n = 47$, $p < .40$), however the results did not reach significance at the $p < .05$ level. Therefore, we can report there is not enough evidence to determine whether or not participant attendance in PAIR workshop sessions is associated with changes in drug or alcohol use as measured by the PACT assessment.

Research Question 3:

Does the PAIR program provide opportunities for Snohomish County's chemically dependent juvenile justice population to build pro-social relationships with community artists? Results of the bivariate Spearman's correlation analysis of PAIR participant attendance and post intervention survey results on youth perception of the PAIR Coordinator enthusiasm and PAIR artist enthusiasm are presented in Table 12. There was a strong but significant positive correlation in the data set between increased

PAIR sessions attended and the respondent's perception of the PAIR Coordinator's enthusiasm (Spearman's $r = .67$, $n = 19$, $p < .01$). Also, there was a weak positive correlation in the data set between the number of PAIR sessions attended by the respondent and the respondent's perception of the PAIR artist's enthusiasm (Spearman's $r = .18$, $n = 19$, $p < .45$), however the results did not reach significance at the $p < .05$ level. Therefore, there was a strong positive correlation in PAIR attendance and participant perception of the PAIR Coordinator's enthusiasm. There was not enough evidence to determine a correlation between PAIR attendance and the respondent's perception of the artist's enthusiasm, although all surveyed youth reported the artists were 'very' or 'extremely' enthusiastic.

Results of the bivariate Spearman's correlation analysis of PAIR participant attendance and post intervention survey results of participant feelings of more encouraging adults and youth interest in community activities are also presented in Table 12. There was a moderate but significant positive correlation in the data set between PAIR sessions attended by the respondent and the respondent's post PAIR feelings of more encouraging adults (Spearman's $r = .47$, $n = 19$, $p < .04$). Also, there was a strong but positive correlation in the data set between PAIR sessions attended and the respondent's interest in community activities (Spearman's $r = .59$, $n = 19$, $p < .01$). Therefore, we can report a strong positive correlation with participant attendance and youth interest in community activities, and there was also a moderate positive correlation with increased attendance and youth feeling they have more encouraging adults in their life.

Results of the bivariate Spearman's correlation analysis of PAIR participant attendance and post intervention survey results on participant involvement in positive community activities and participant feelings about the community in which they live are presented in Table 13. There was a moderate positive correlation in the data set between PAIR sessions attended and the respondent's involvement in community activities (Spearman's $r = .43$, $n = 19$, $p < .08$), however the results did not reach significance at the $p < .05$ level. Also, there was no correlation in the data set between PAIR sessions attended and respondent feelings about the community they live in (Spearman's $r = .08$, $n = 19$, $p < .74$), however the results did not reach significance at the $p < .05$ level. Therefore, we can report that there is not enough evidence to determine a correlation between PAIR attendance and youth feelings about the community they live in. With PAIR attendance and youth involvement in positive activities, although there was not enough evidence to determine correlation, the results were very close to being significant at the $p < .05$ level.

Results of the bivariate Spearman's correlation analysis of PAIR participant attendance and post intervention survey results on participant perception of community support and feelings of connection to community are presented in Table 13. There was a weak positive correlation in the data set between PAIR sessions attended and the respondent's perception of community support (Spearman's $r = .14$, $n = 19$, $p < .57$), however the results did not reach significance at the $p < .05$ level. Finally there was a strong positive correlation in the data set that did reach significance between PAIR sessions attended and the respondent's feelings of connection to community (Spearman's $r = .55$, $n = 19$, $p < .02$). Therefore, we can report that there is a strong positive

correlation in participant feelings of connection to community and attendance. There was not enough evidence to determine a correlation between PAIR attendance and participant perception of community support.

Results of the bivariate Spearman's correlation analysis of PAIR participant attendance and post intervention survey results on participant motivation to abstain from drug use and alcohol use are presented in Table 14. There was a moderate positive correlation in the data set that did reach significance between sessions attended and participant motivation to abstain from drug use (Spearman's $r = .45$, $n = 19$, $p < .05$). There was a moderate positive correlation in the data set that did reach significance between sessions attended and motivation to abstain from alcohol use (Spearman's $r = .50$, $n = 19$, $p < .03$). Therefore, we can report that there is a moderate positive correlation with youth participation in PAIR workshops and participant motivation to abstain from both drug use and alcohol use.

Interviews conducted with PAIR artists, a Superior Court Judge and the PAIR Coordinator also provided anecdotal evidence that the intervention was impacting the dynamic risk and protective factors of the study youth. Artists were asked about their observations regarding the program and participants. One artist reported she was deliberate about establishing trust with the youth in the workshops by following through on commitments and communicating often with participants, stating, "You could see them bonding together, and more trust was developed with each other and with us" (recorded interview, December 6, 2012). Another artist also indicated the program increases the chance youth will make a connection with someone outside the courthouse, reporting, "If youth don't get this extra bump, they won't be as likely to have the

opportunity to make meaningful connections in the community" (recorded interview, December 6, 2012). Another artist also reported that trust was intentionally developed with the youth and she tried to get participants success in small increments in order to build their confidence (recorded interview, December 6, 2012). One Superior Court Judge was interviewed and he felt the artist and Program Coordinator made a difference for many of the youth coming from Drug Court by helping the participants connect with an adult and establishing a trusting relationship, indicating, "A lot of (youth) have traumatic histories with adults. The more positive connections they have with adults the less they fear them, (and) the more they trust them" (recorded interview, December 24, 2012). The establishment of a trusting relationship, as an important positive and deliberate proviso, was emphasized by all of the program deliverers that agreed to recorded interviews and this assertion is supported by research. In the Garringer (2007) mentoring guide, trust is emphasized and it is recommended mentors, "Take the time and effort necessary for your mentee to develop trust in you. While you know that your mentee should trust you, the reality is that you have to earn the trust" (p. 17).

The PAIR artists reported they saw pro-social community ties developed with youth participants during the program. Another program deliverer re-counted how she spoke with community members who commented on the articles in the local newspaper, stating, "They were amazed at the artwork produced by PAIR youth" (recorded interview, December 19 2012). One artist saw connections going on between kids and community members viewing the artwork. He felt the display of art in the local newspaper, public library, art shows and public spaces was a way to validate youth's work and complete, "…the circle that this is their community" (recorded interview,

December 6, 2012). One of the stakeholders indicated the biggest surprise was, "Realizing how many of these kids have artistic abilities, (and) how talented they are" (Recorded Interview, December 24, 2012). These observations suggest additional research might be warranted, with a future study focusing on how PAIR youth's artwork and their affirming life stories might impact the community and/or the community perception of how to best deal with juvenile delinquency.

Program deliverers reported additional activities youth became connected with beyond PAIR. A conversation with a program deliverer, revealed added opportunities for PAIR youth, such as a local government commissioned art projects, a community park art project and one youth was asked to create a piece for a local charity auction (recorded interview, December 19, 2012). According to one artist, "…pro-social activities were encouraged and youth were referred to free art classes, college courses in the community and many participants were connected to glassblowing opportunities beyond the workshop" (recorded interview, December 6, 2012). The artists encouraged youth to participate in pro-social activities, but one artist reported the PAIR program could do better at finding opportunities to connect kids to other resources like local college courses (recorded interview, December 6, 2012). He went on to say additional conversations about how to improve the program can help deliverers and artists expand their scope in what and who the kids can be connected to. One adult stakeholder observed youth become more open to other positive activities in the community and he saw participants, "…had positive connections with each other, (and) grow more motivated to re-engage with activities they had fun and success with prior to their addiction" (recorded interview, December 24, 2012).

Recorded interviews with the stakeholders revealed anecdotal evidence that youth motivation to abstain from drug and alcohol use was increasing as interest and involvement in the PAIR program developed. When asked if motivation to abstain from using drugs or alcohol increased, one artist indicated she thought PAIR helped youth stay motivated, but it was only a part in a bigger puzzle. She reported some youth did relapse during the program, but the artists promoted sobriety while other programs like Drug Court, support meetings, and formal substance abuse treatment provided relapse assistance to youth (recorded interview, December 6, 2012). An adult stakeholder described an observed cognitive dissonance take place when one youth realized her behavior was having a negative effect on her siblings after feeling the positive influence of PAIR artists and mentors. The youth's desire to be a 'positive role model' for her siblings further motivating her to commit to positive behavior change (recorded interview, December 24, 2012). A program deliverer, saw youth add sober support meetings to their resource list, as youth would network and invite one another to attend sober support meetings, further expanding support networks (recorded interview, December 19, 2012). She went on to say, "It felt like they were being decisive about staying clean", and participants encouraged each other to engage in PAIR and not use drugs or alcohol.

Direct observation of PAIR workshops and informal discussion with program deliverers revealed additional anecdotal information regarding program outcomes. The program deliverers, artists and the other direct service providers (probation counselors, Judge, educators) supported youth participants beyond PAIR by staying available to youth well after the PAIR program and Drug Court ended. Many of the youth continued

to be involved in additional PAIR workshops and supplementary glassblowing opportunities beyond their initial involvement and completion of the PAIR workshop.

Many youth were very appreciative of the opportunity to have their work displayed publicly, and one youth commented that he hoped the art might inspire others to overcome their past. During the workshops youth would support one another with positive affirmations of the artwork being created. The artists were consistently purposeful in establishing a positive atmosphere, encouraging youth with praise, and demonstrating patience. There were instances where youth would be struggling with court compliance while participation in PAIR continued, allowing the workshop atmosphere to serve as a safe place to troubleshoot problem issues. The encouraging milieu seemed to give some youth more confidence and motivation to stay engaged in the program even when they were struggling in other aspects of their lives. The stakeholders were also deliberate about cultivating youth efficacy, saying, "These kids can do anything and I try to help them to see that possibility, (and) it's a struggle for them to believe they can succeed, but they really can" (recorded interview, December 6, 2012). Another program stakeholder also commented, "Giving youth the PAIR opportunity got them thinking, 'if I can do this, then I can have fun when I'm not high', and it opens them up to doing more opportunities", lending evidence to support the claim that youth motivation to participate in pro-social activities beyond PAIR increased alongside surges in self-efficacy (recorded interview, December 24, 2012). Interim updates on program outcomes and participant survey aggregate results were provided to program deliverers, motivating them to continue to provide PAIR workshops the youth found interesting and to make

program improvements based on youth suggestions. Youth were also given education credit hours by some schools for participating in the PAIR program.

Discussion:

As mentioned earlier in this report, prior research has shown that youth involvement in structured pro-social activities is a protective factor against current and future substance abuse, and this study provides evidence youth attendance in PAIR is correlated to youth interest and involvement in structured pro-social activities (see Figure 3). Youth participated in additional pro-social activities beyond PAIR including, art shows and exhibits, individual commissioned creative arts opportunities, teen art programming and classes, panel participation in a Juvenile Justice Conference, multiple PAIR program participation (8 youth participated in two or more workshops), and supplemental glassblowing workshops where twelve youth participated in one or more glass workshops. This study also provides evidence youth participation in the PAIR program is correlated to an increase in the number of non-family pro-social adults in the participant's lives, a research validated protective factor (see Figure 4). Consequently, the preceding results have implications for stakeholders as they consider continued support and the dedication of limited resources to this intervention.

This study provides evidence female juvenile-justice involved youth were more likely to participate in the PAIR program when compared to their male counterparts. While the majority of participants were female, the survey results indicate 100% of male respondents felt 'much more motivated' to abstain from drug and alcohol use compared to 71% of the female respondents following the intervention (see Figure 5). These results have implications for program deliverers as they move forward with referring youth to

the program and, as of this writing, stakeholders are engaged in the process of establishing specific art mediums that would encourage more male youth to participate. Program deliverers reported many of the male participants have expressed interest in graffiti art and more hands on activities like metal and wood sculpture. An 'activities survey' is also currently being utilized throughout the Snohomish County Juvenile Court to gauge youth interest in a variety of community activities, and by grouping the data by gender the program deliverers might better serve the entire population through careful consideration of the results as they plan for future PAIR workshops.

Of the 19 youth that completed the post PAIR survey, 84% of youth felt the PAIR Coordinator was very or extremely enthusiastic while 100% of respondents felt the artists were very or extremely enthusiastic (see Figure 6). Results show 84% of surveyed youth felt there were more encouraging adults in their lives while the same percentage also had more interest in community activities (see Figure 7). Results show 79% of youth were more involved in positive activities, liked the community more, and perceived more community support at the conclusion of the PAIR program (see Figure 8 and 9). With respect to respondent motivation to abstain from drug and alcohol use, the survey results indicated 79% of youth were more motivated to not use drugs and not use alcohol post intervention (see Figure 10).

This study only takes into account gender, pro-social community attachment, the strength and number of pro-social adults in the youth's life, pro-social community activity interest and involvement, drug use and alcohol use. Additional demographic information including race, ethnicity, income, etc. could prove to be critical variables that may or may not be correlated to these measures of participant risk and protective factors.

CHAPTER 5

Chapter 5-Conclusion:

Expected Findings:

The PAIR program evaluation provides stakeholders with findings and insight into the effectiveness of this pilot intervention. The study provides evidence youth engagement in PAIR increases protective factors, including, interest and involvement in pro-social activities and the number of positive adults in participant's lives. There is not enough evidence to support a claim PAIR impacts pro-social community ties with program youth, although there was a strong positive correlation with youth's increased attendance and youth reporting a positive connection to community.

The program was specifically designed to serve youth diagnosed with a substance abuse problem. Current drug and alcohol use was studied and there was insufficient evidence to support a claim the PAIR intervention impacted participant drug or alcohol use. There was however a moderate positive correlation with increased PAIR attendance and youth motivation to abstain from drug or alcohol use, suggesting that, as youth engagement and participation was strengthened, motivation to abstain from drug and alcohol use increased. The long-term effect of this increased motivation in PAIR youth merits further study, as it is important to increase motivation when addressing substance abuse issues with youth. Research suggests motivation is dynamic, and it can be modified and influenced by pro-social interactions (Miller, 1999; Prochaska, 1995). Miller, (1999) describes how motivation to abstain from drug and alcohol use is influenced by social interactions and community support, and these external factors help to provide the 'conditions of change' (p. 3).

The gender of youth being referred to the PAIR program was significantly different from the overall juvenile offender population and program deliverers should reflect on the disparity found in this study. Stakeholders should continue to evaluate whether possible changes need to be made in the program and actively consider new ways to engage male juvenile court involved youth.

Making a significant impact on the number of positive adults and pro-social activities with program youth was the primary goal of the PAIR program from inception. Born out of the Reclaiming Futures model to integrate service coordination and intervention plans that include involvement in pro-social activities and 'natural helpers', the PAIR program is achieving promising results. The program deliverers have embraced their role as being 'part of a bigger puzzle' that includes court involvement and formal drug and alcohol treatment. The full impact of the PAIR program on youth participant substance abuse issues, within this coordination of care, deserves further research.

The PAIR program is currently funded by the Blanche Miller Trust Fund on a year-to-year basis. Providing quality and sustainable programing requires stakeholders to continue to collect data and evaluate program effectiveness. Through this evaluation process policy makers might pursue diverse funding opportunities, such as the Snohomish County .01 percent sales tax revenue for funding of chemical dependency specific services, and Washington State juvenile justice funding requiring interventions be research-based, evidence-based or promising programs with rigorous research criteria (WSIPP, 2010).

This study is one of the first pilot program evaluations conducted in Snohomish County using PACT assessment risk and protective factor data from inception to evaluation. The specific risk and protective factors were selected as PAIR was being developed, assisting stakeholders in delivering the program with *purposeful intent*. This *purposeful intent* appears to have encouraged professionals to incorporate specific protective factor elements into the program. For example, when changes to PAIR were considered, the emphases remained on how the modifications would positively or adversely influence the program goals to increase participant pro-social engagement with adults, positive connection to community and grow pro-social activity involvement. As Vincent (2012) describes how policy makers might use risk assessments in decision making and outcomes; the PACT assessment results can assist PAIR deliverers and juvenile court personnel to 'improve practice' and, "Staff morale also could be enhanced by awareness that the agency's goals are being met (as demonstrated through data that came out of their direct efforts)" (p. 87).

Limitations and Future Work:

The future work of policy makers should include the establishment of a separate research partner, not connected to the PAIR program or the Juvenile Court. The research partner, possibly from academia, another governmental organization or a research firm, would develop the tools to conduct a rigorous program evaluation. The author of this report is an employee of the Court, while the PAIR Coordinator is a pseudo-employee of the Court, and both individuals have worked together since the creation and implementation of the intervention. Consequently, the perception of bias within this

study is a concern, as these evaluators appear to be assessing the quality of their own work.

Although the salary of the author of this report is not directly tied to the achievement or perceived success of the PAIR program evaluation results, the significant time, energy, investment in development, involvement with implementation and maintenance of the program creates an impression of bias, as "...the potential for organizational pressure is greater when the evaluator is employed by the organization whose program is being evaluated than when the evaluator is employed by an outside agency" (Fitzpatrick, 2011, p. 102). A completely separate research partner could be contracted with to create an independent assessment tool, conduct data analysis, author reports and document research findings at 'arms length' from the Court and PAIR Coordinator, mitigating any real or perceived conflict of interest. Funding opportunities exist for this type of research and, as an example, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) has grants available for 'Mentoring Best Practices Research' (U.S. Department of Justice, 2012).

This evaluation focuses on the impact of a specific set of risk and protective factors and excludes the possible impact of other components of the program on a number of empirically based risk and protective factors. A review of the literature on art programming effects on at-risk youth indicates that involvement in the arts, whether in school or as an extra curricular activity, is correlated to higher academic achievement and civic engagement, reduction in delinquency and increased pro-social peer relationships (Catterall, 2012; Rapp-Paglicci, 2007; Farnum, 1998). Although the effects reported in these other studies were beyond the scope of this analysis, it would be worthwhile to

examine possible correlations between youth involvement in the PAIR program and increases in protective factors or decreases in risk factors related to education, employment, current living situation, social skills, pro-social peer relationships, aggression and others.

With respect to program deliverer interpretations of program effects and observations, response bias is also a concern. One might argue these professional providers could be casting the program in a positive light as a result of substantial interactions and investment in the program. The study may also be questioned due to the Hawthorne effect, as youth and program deliverers were aware they were participating in a study, affecting the validity of survey and interview responses (Fink, 2009). These considerations need to be taken into account and provide evidence there is a need for future research on the PAIR program. Additional insight can also be gained through further analysis of recidivism rates over time, race and ethnicity, and finding a suitable control group for comparison.

APPENDICES

APPENDICES

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Appendix A

PACT 2.0 Full Risk Assessments Completed from 1/6/11 to 7/6/11 in Snohomish County

Retrieved on 4/7/12

1. History of structured recreational activities: Within the past 5 years, minor has participated in structured and supervised pro-social community activities, such as religious group/church, community group, cultural group, club, athletics, or other community activities.
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
Involved in 2 or more structured activities	72		25.99%
Involved in 1 structured activity	100		36.1%
Never involved in structured activities	105		37.91%

2. Current interest and involvement in structured recreational activities: Minor participates in structured and supervised pro-social community activities, such as religious group/church, community group, cultural group, club, athletics, or other community activity.
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
Currently involved in 2 or more structured activities	6		2.17%
Currently involved in 1 structured activity	35		12.64%
Currently interested but not involved	95		34.3%
Not interested in any structured activities	141		50.9%

3. History of positive adult non-family relationships not connected to school or employment: This includes adults, who are not teachers and not part of the minor's family, who can provide support and model pro-social behavior, such as religious leader, club member, community person, etc.
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
No positive adult relationships	132		47.65%
1 positive adult relationship	99		35.74%
2 positive adult relationships	32		11.55%
3 or more positive adults relationships	14		5.05%

4. Current positive adult non-family relationships not connected to school or employment: Adults, who are not teachers and not part of the minor's family, who can provide support and model pro-social behavior, such as religious leader, club member, community person, or probation officer, etc.
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
No positive adult relationships	138		49.82%
1 positive adult relationship	84		30.32%
2 positive adult relationships	37		13.36%
3 or more positive adults relationships	18		6.5%

5. Current pro-social community ties: Minor feels there are people in his or her community who encourage him or her to stay out of trouble and are willing to help the minor.
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
No pro-social community ties	102		36.82%
Some pro-social community ties	169		61.01%
Has strong pro-social community ties	6		2.17%

6. History of minor's alcohol use:
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
No use of alcohol	39		14.08%
Past use of alcohol	238		85.92%
Alcohol disrupted education	97		35.02%
Alcohol caused family conflict	137		49.46%
Alcohol interfered with keeping pro-social friends	113		40.79%
Alcohol caused health problems	22		7.94%
Alcohol contributed to criminal behavior	83		29.96%
Minor needed increasing amounts of alcohol to achieve same level of intoxication or high	54		19.49%
Minor experienced withdrawal problems	25		9.03%

7. History of minor's drug use:
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
No past drug use	35		12.64%
Past use of drugs	242		87.36%
Drugs disrupted education	151		54.51%
Drugs caused family conflict	183		66.06%
Drugs interfered with keeping pro-social friends	158		57.04%
Drugs caused health problems	35		12.64%
Drugs contributed to criminal behavior	119		42.96%
Minor needed increasing amounts of drugs to achieve same level of intoxication or high	90		32.49%
Minor experienced withdrawal problems	67		24.19%

8. History of referrals for drug/alcohol assessment:
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
Never referred for drug/alcohol assessment	118		42.6%
Referred but never assessed	12		4.33%
Diagnosed as no problem	6		2.17%
Diagnosed as abuse	10		3.61%
Diagnosed as dependent/addicted	131		47.29%

9. Minor is currently using alcohol or drugs:
Get Detail

277 - Total Participants

277 - Total Participants Who Responded

100% - Percentage Who Responded

Answer	Responses	Visual Percentage	Percentage
No, do not compete Domain 8B	68		24.55%
Yes, must complete Domain 8B	209		75.45%

Appendix B

PACT Risk Needs Assessment Questions

Part A:

- Current interest and involvement in pro-social structured recreational activities:
  - Not interested in any structured activities
  - Currently interested but not involved
  - Currently involved in 1 structured activity
  - Currently involved in 2 or more structured activities
- Current positive adult non family relationships:
  - No positive adult relationship
  - 1 positive adult relationship
  - 2 positive adult relationships
  - 3 or more positive adults relationships
- Current pro-social community ties:
  - No pro-social community ties
  - Some pro-social community ties
  - Has strong pro-social community ties

Part B:

- Current alcohol and drug use:
  - No
  - Yes

Appendix C

(Sample survey for PAIR youth participant)

I.D. #____

Dear students, we would like you to fill out this survey to provide feedback to the PAIR program. This is important so that we know your thoughts. All of your individual responses are confidential and will not be shared with your probation counselor. Please answer the following twelve questions that deal with your feelings about the PAIR program. Thank you for taking the time to complete this survey.

Name:_____

1. How enthusiastic was the PAIR coordinator (Henri) when working with you?
    a. Extremely enthusiastic
    b. Very enthusiastic
    c. Moderately enthusiastic
    d. Slightly enthusiastic
    e. Not at all enthusiastic

2. Compared to three months ago, do you feel more connected to your community?
    a. Much more connected
    b. Sort of connected
    c. Not sure
    d. Slightly less connected
    e. Not at all connected

3. How enthusiastic was the PAIR artist when working with you?
    a. Extremely enthusiastic
    b. Very enthusiastic
    c. Neutral
    d. Slightly enthusiastic
    e. Not at all enthusiastic

4. Compared to three months ago, do you feel like there are adults in your life that are much more encouraging?
    a. A lot more encouraging adults
    b. Somewhat more encouraging adults
    c. No change with encouraging adults
    d. Slightly less encouraging adults
    e. No encouraging adults

5. Compared to three months ago, how INTERESTED are you in positive activities within the community you live?
    a. Much more interested
    b. Sort of more interested
    c. Same amount of interest as before
    d. Slightly less interested
    e. Not at all interested

6. Compared to three months ago, how INVOLVED are you in positive activities in your community?
    a. Much more involved
    b. Sort of involved
    c. Same amount of involvement as before
    d. Slightly less involved
    e. Not at all involved

7. Compared to three months ago, how do you feel about the community where you live?
    a. Like the community a lot
    b. Like a little bit
    c. Neither like nor dislike
    d. Dislike a little bit
    e. Strongly dislike

8. Compared to three months ago, how much support does the community in which you live provide?
    a. A great deal more support
    b. Some more support
    c. Not sure
    d. Less support
    e. No support at all

9. Compared to three months ago, how motivated are you to not use drugs?
    a. Much more motivated
    b. Somewhat more motivated
    c. Same as three months ago
    d. Slightly less motivated
    e. Not at all motivated

10. Compared to three months ago, how motivated are you to not use alcohol?
    a. Much more motivated
    b. Somewhat more motivated
    c. About as motivated
    d. Slightly less motivated
    e. Not at all motivated

11. What art mediums would you suggest for future PAIR workshops?

    _____

    _____

12. What changes would most improve the PAIR program?

    _____

    _____

Thank you for your participation and feedback.

Table 1 Summary of Youth Referred to PAIR Workshops.

Workshops	Number of Youth	Percent	Valid Percent	Cumulative Percent
1st PAIR Workshop	8	14.8	14.8	14.8
2nd PAIR Workshop	9	16.7	16.7	31.5
3rd PAIR Workshop	14	25.9	25.9	57.4
4th PAIR Workshop	13	24.1	24.1	81.5
5th PAIR Workshop	10	18.5	18.5	100.00
Total	54	100.0	100.0	

Table 2 Summary of Referred Youth Age at Start of PAIR Workshop.

	Number of Youth	Percent	Valid Percent	Cumulative Percent
14 Years Old	2	3.7	3.7	3.7
15 Years Old	10	18.5	18.5	22.2
16 Years Old	21	38.9	38.9	61.1
17 Years Old	14	25.9	25.9	87.0
18 Years Old	6	11.1	11.1	98.1
19 Years Old	1	1.9	1.9	100.00
Total	54	100.0	100.0	

Table 3 Summary of Referred Participant Gender.

	Number of Youth	Percent	Valid Percent	Cumulative Percent
Female	35	64.8	64.8	64.8
Male	19	35.2	35.2	100.0
Total	54	100.0	100.0	

Table 4 Summary of Referred Youth Average Age and Standard Deviation.

Total Youth	**54**
Missing	0
Mean	16.28
Median	16
Mode	16
Standard Deviation	1.071

Table 5 Summary of Wilcoxon Signed Rank Test on Interest and Involvement in Pro-Social Activities.

	N	Mean Rank	Sum of Ranks
Negative Ranks	0*	.00	.00
Positive Ranks	14**	7.50	105.00
Ties	33***		
Total	47		

*Post Interest & Involvement in Pro-Social Activities < Pre Interest & Involvement in Pro-Social Activities.
**Post Interest & Involvement in Pro-Social Activities > Pre Interest & Involvement in Pro-Social Activities.
***Post Interest & Involvement in Pro-Social Activities = Pre Interest & Involvement in Pro-Social Activities.

Descriptive Statistics

	N	Percentiles		
		25th	50th (Median)	75th
Pre Interest & Involvement in Pro-Social Activities	49	1.00	1.00	2.00
Post Interest & Involvement in Pro-Social Activities	47	1.00	2.00	3.00

Test Statistics Wilcoxon Signed Ranks Test

	Post Interest & Involvement in Pro-Social Activities – Pre Interest & Involvement in Pro-Social Activities
Z	-3.407*
Asymp. Sig (2-tailed)	.001

*Based on negative ranks.

Table 6 Summary of Wilcoxon Signed Rank Test on Positive Adult Non-Family Relationships.

	N	Mean Rank	Sum of Ranks
Negative Ranks	1*	6.50	6.50
Positive Ranks	15**	8.63	129.50
Ties	31***		
Total	47		

*Post Positive Adult Non-Family Relationships < Pre Positive Adult Non-Family Relationships.
**Post Positive Adult Non-Family Relationships > Pre Positive Adult Non-Family Relationships.
***Post Positive Adult Non-Family Relationships = Pre Positive Adult Non-Family Relationships.

Descriptive Statistics

	N	Percentiles		
		25th	50th (Median)	75th
Pre Positive Adult Non-Family Relationships	49	1.00	1.00	2.00
Post Positive Adult Non-Family Relationships	47	1.00	2.00	3.00

Test Statistics Wilcoxon Signed Ranks Test

	Post Positive Adult Non-Family Relationships – Pre Positive Adult Non-Family Relationships
Z	-3.346*
Asymp. Sig (2-tailed)	.001

*Based on negative ranks.

Table 7 Summary of Wilcoxon Signed Rank Test on Pro-Social Community Ties.

	N	Mean Rank	Sum of Ranks
Negative Ranks	2*	5.00	10.00
Positive Ranks	7**	5.00	35.00
Ties	38***		
Total	47		

*Post Pro-Social Community Ties < Pre Pro-Social Community Ties.
** Post Pro-Social Community Ties > Pre Pro-Social Community Ties.
*** Post Pro-Social Community Ties = Pre Pro-Social Community Ties.

Descriptive Statistics

	N	Percentiles		
		25th	50th (Median)	75th
Pre Pro-Social Community Ties	49	1.00	1.00	1.00
Post Pro-Social Community Ties	47	1.00	1.00	1.00

Test Statistics Wilcoxon Signed Ranks Test

	Post Pro-Social Community Ties – Pre Pro-Social Community Ties
Z	-1.667*
Asymp. Sig (2-tailed)	.096

*Based on negative ranks.

Table 8 Summary of Bivariate Spearman's Correlation for Post Intervention PACT Scores of Protective Factors and Participant Attendance in PAIR Workshops.

	PAIR Sessions Attended	**Interest & Involvement in Pro-social Activities**	**Positive Adult Non-family Relationships**	**Pro-social Community Ties**
PAIR Sessions Attended	-	.223	.305*	.546**

* P < .05; ** P < .01

Table 9 Summary of McNemar's Test on participant alcohol use as measured by the PACT.

			Post Alcohol Use		
			Not Currently Using	Currently Using	Total
Initial Alcohol Use	Not Currently Using	Count	26	6	32
		% Within Initial Alcohol Use	81.3%	18.8%	100%
		% Within Post Alcohol Use	83.9%	37.5%	68.1%
	Currently Using	Count	5	10	15
		% Within Initial Alcohol Use	33.3%	66.7%	100%
		% Within Post Alcohol Use	16.1%	62.5%	31.9%
Total		Count	31	16	47
		% Within Initial Alcohol Use	66.0%	34.0%	100%
		% Within Post Alcohol Use	100%	100%	100%

Chi-Square Tests

	Value	Exact Sig. (2-sided)
McNemar's Test		1.00*
N of Valid Cases	47	

*Binomial distribution used.

Table 10 Summary of McNemar's Test on participant drug use as measured by the PACT.

			Post Drug Use		
			Not Currently Using	Currently Using	Total
Initial Drug Use	Not Currently Using	Count	20	6	26
		% Within Initial Drug Use	76.9%	23.1%	100%
		% Within Post Drug Use	66.7%	35.3%	55.3%
	Currently Using	Count	10	11	21
		% Within Initial Drug Use	47.6%	52.4%	100%
		% Within Post Drug Use	33.3%	64.7%	44.7%
Total		Count	30	17	47
		% Within Initial Drug Use	63.8%	36.2%	100%
		% Within Post Drug Use	100%	100%	100%

Chi-Square Tests

	Value	**Exact Sig. (2-sided)**
McNemar's Test		.454*
N of Valid Cases	47	

*Binomial distribution used.

Table 11 Summary of Bivariate Spearman's Correlation for Post Intervention PACT Scores of Risk Factors and Participant Attendance in PAIR Workshops.

	PAIR Sessions Attended	Drug Use	Alcohol Use
PAIR Sessions Attended	-	-.03	-.13

Table 12 Summary of Bivariate Spearman's Correlation for Post PAIR Survey and Participant Attendance.

	PAIR Sessions Attended	Coordinator Enthusiasm	Artist Enthusiasm	Encouraging Adults	Interest in Community Activities
PAIR Sessions Attended	-	.67**	.18	.47*	.59**

*P < .05 ** P < .01

Table 13 Summary of Bivariate Spearman's Correlation for Post PAIR Survey and Participant Attendance.

	PAIR Sessions Attended	Positive Community Activities	Feelings About Community	Community Support	Connection to Community
PAIR Sessions Attended	-	.43	.08	.14	.55*

*P < .05

Table 14 Summary of Bivariate Spearman's Correlation for Post PAIR Survey and Participant Attendance.

	PAIR Sessions Attended	Abstain from Drug Use	Abstain from Alcohol Use
PAIR Sessions Attended	-	.45*	.50*

*P < .05

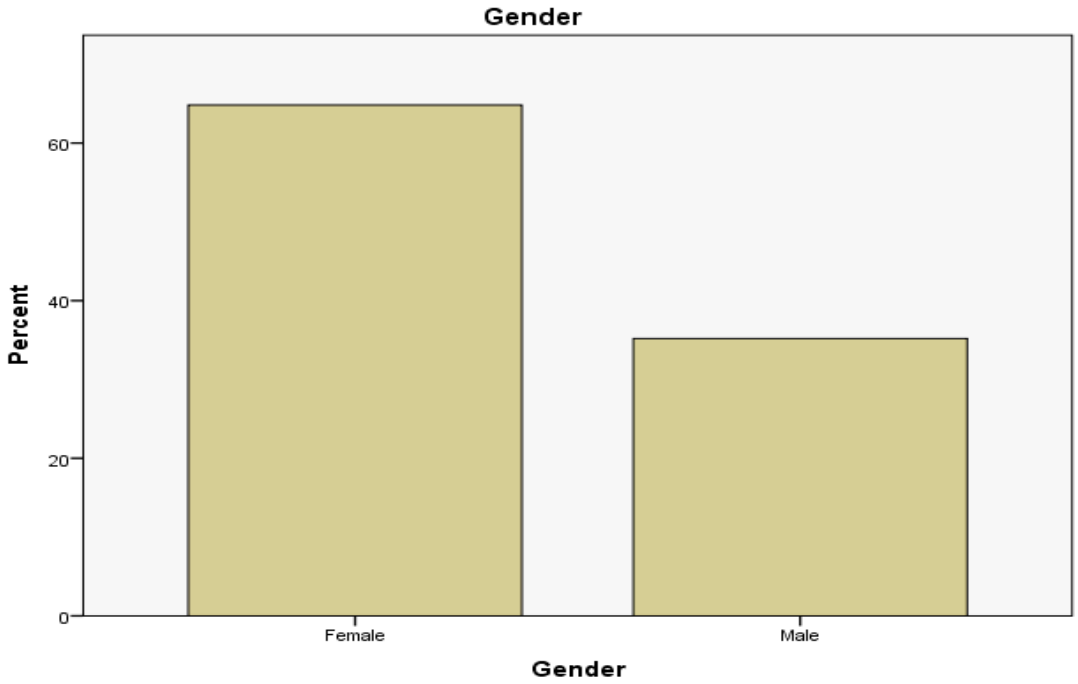

Figure 1. This figure shows the gender of all PAIR referred youth in percentages.

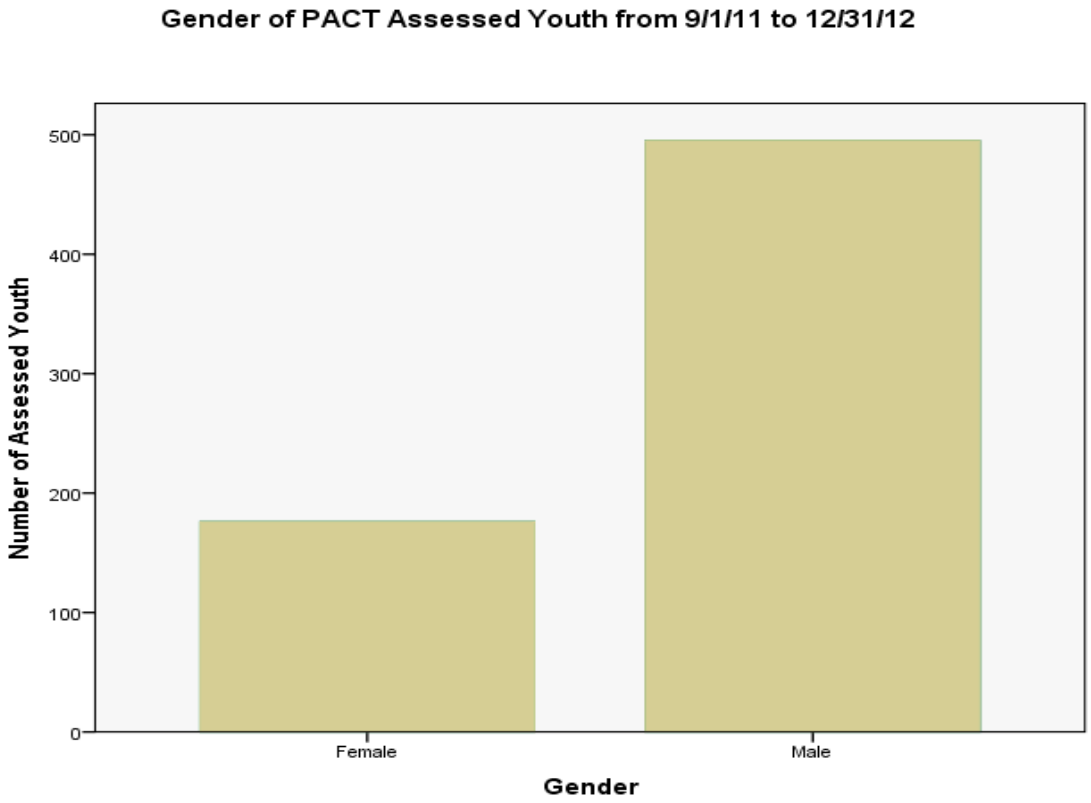

Figure 2. This shows the gender of all other assessed youth during study period.

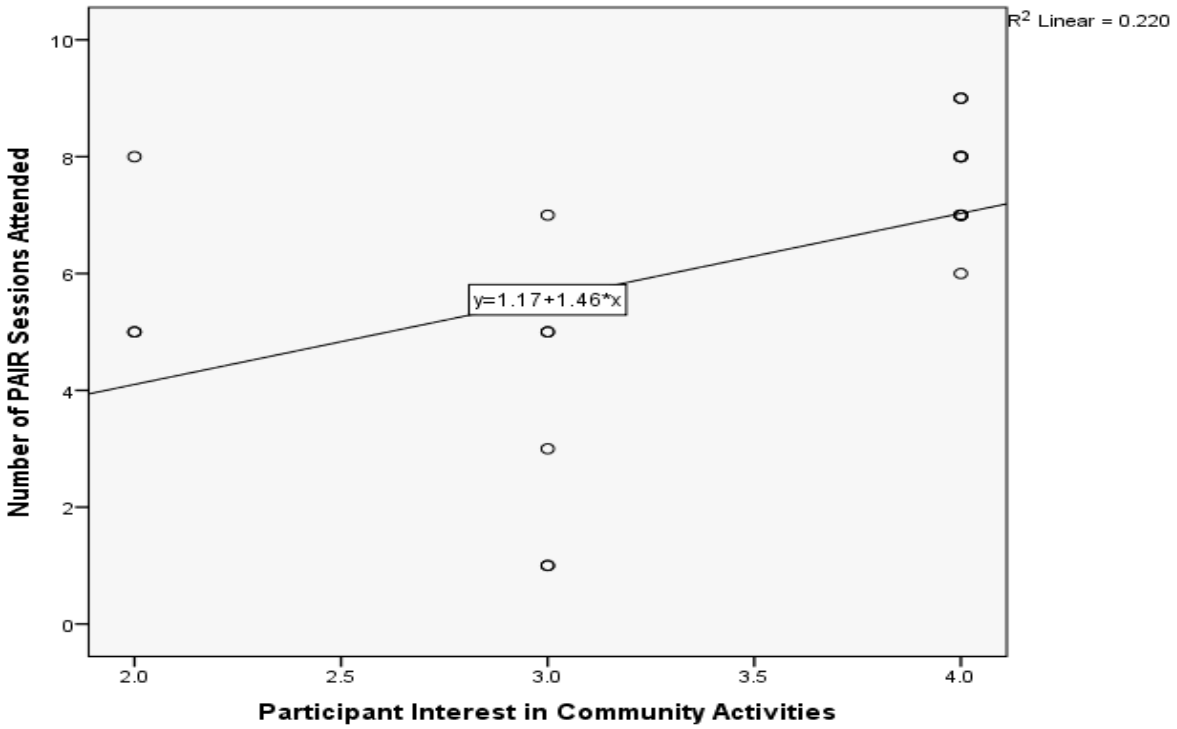

Figure 3. Scatterplot showing the relationship between PAIR sessions attended and participant interest in community activities.

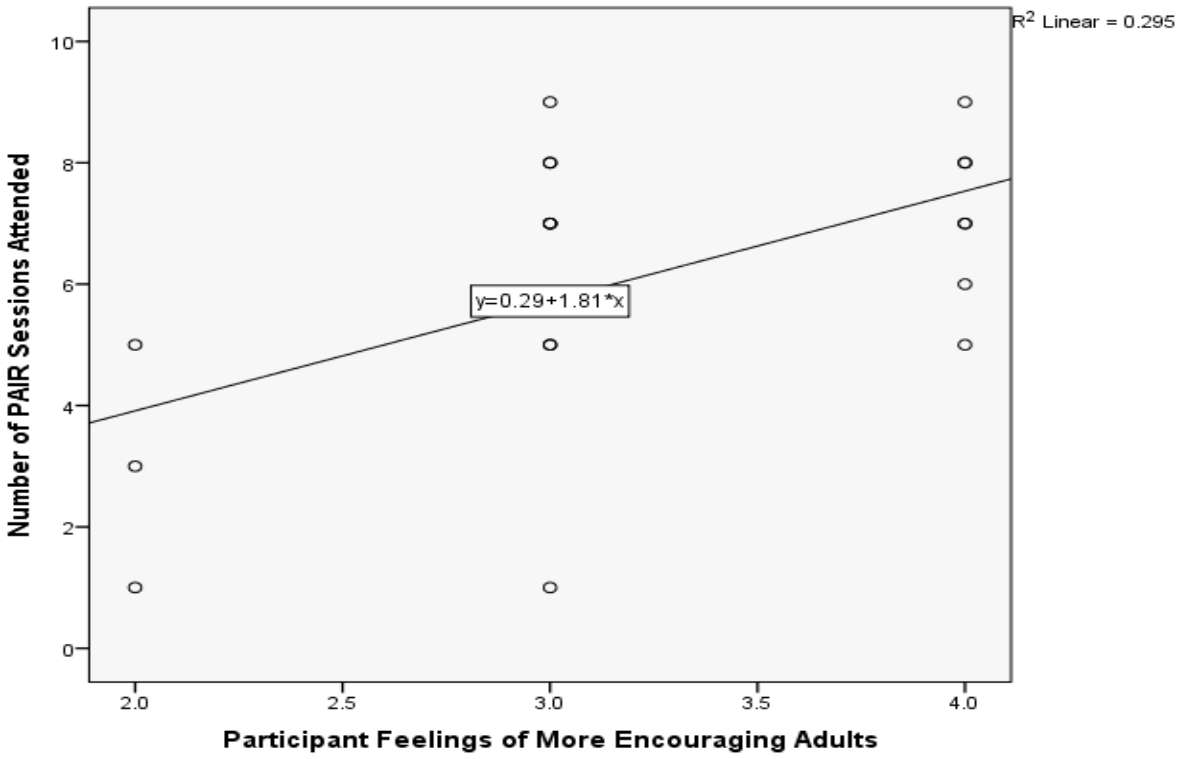

Figure 4. Scatterplot showing the relationship between PAIR sessions attended and the feelings of encouraging adults.

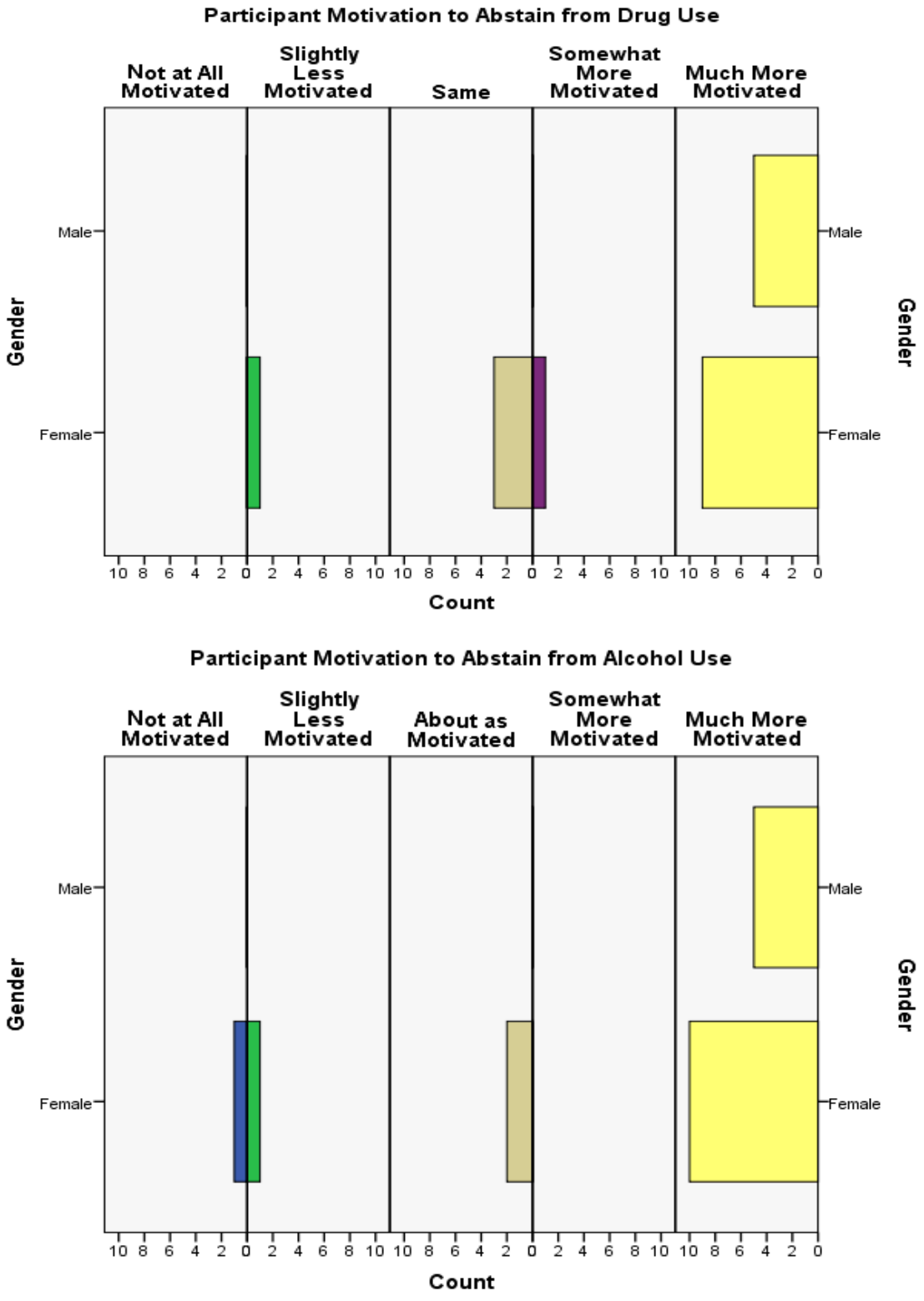

Figure 5. These two figures show PAIR participant motivation to abstain from drug use (top) and alcohol use separated by gender.

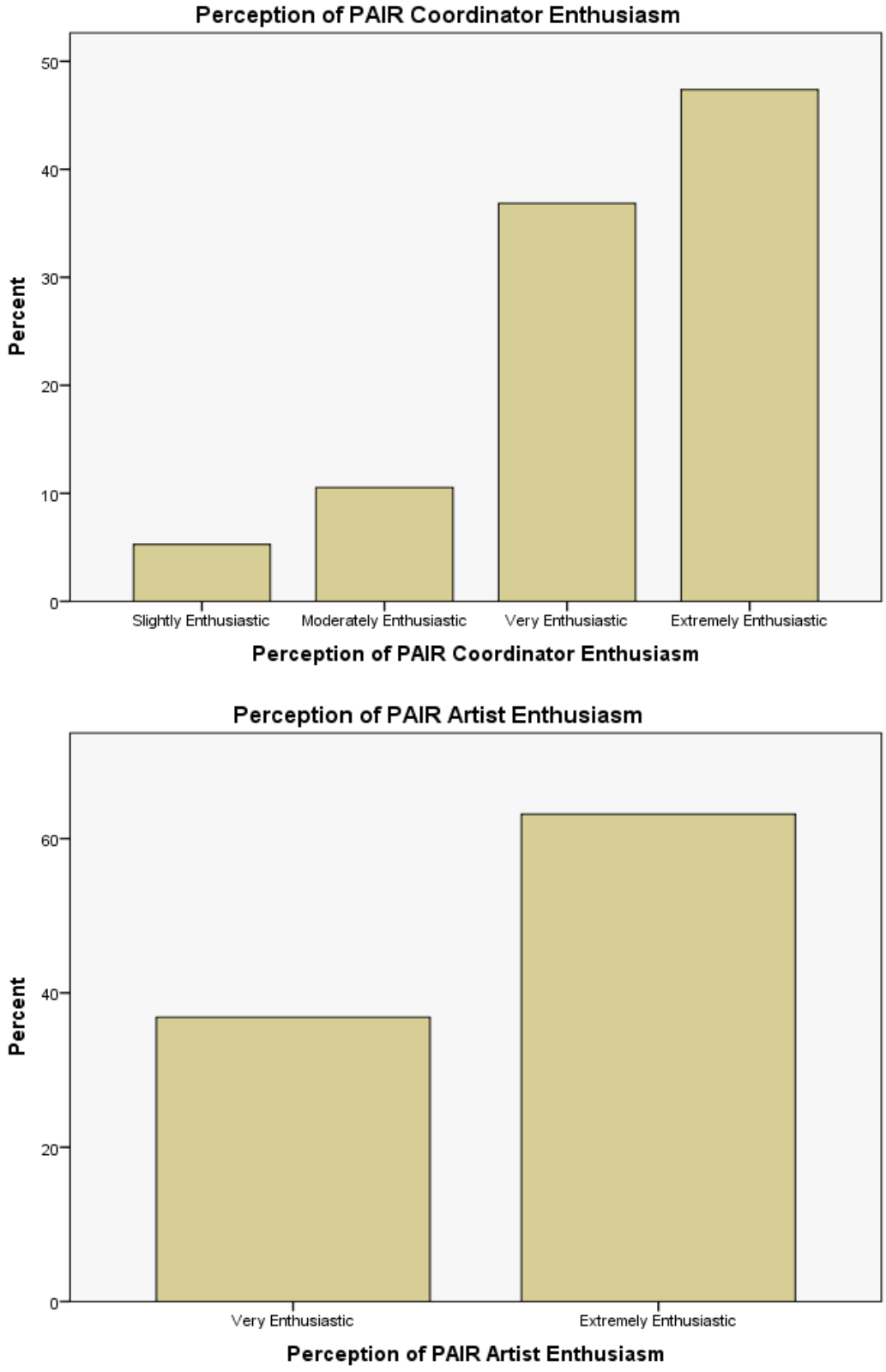

Figure 6. These two figures show the youth perception of coordinator (top) and artist enthusiasm, as measured by the post intervention survey.

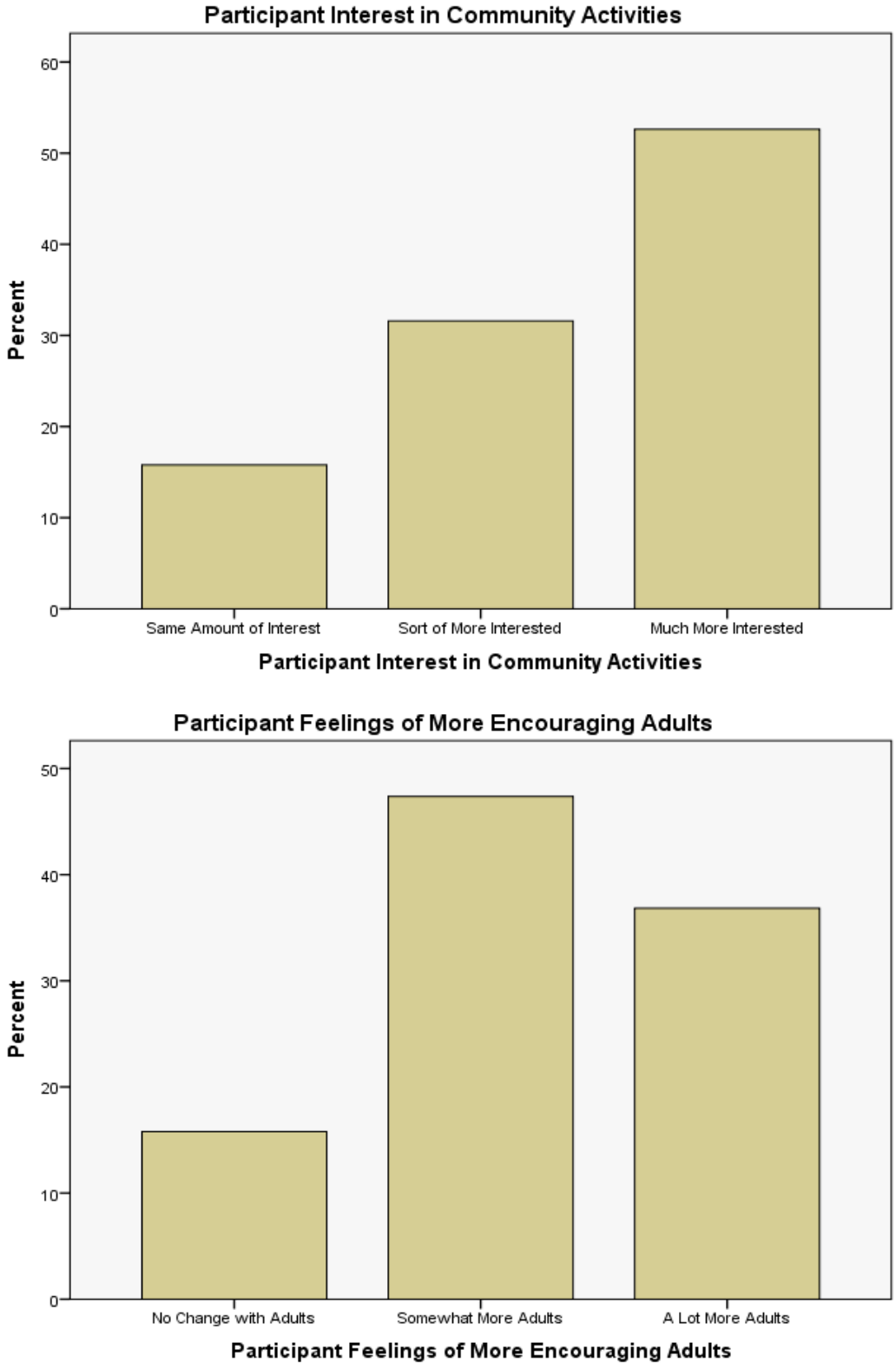

Figure 7. These two figures show the youth interest in community activities (top) and feelings about encouraging adults, as measured by the post intervention survey.

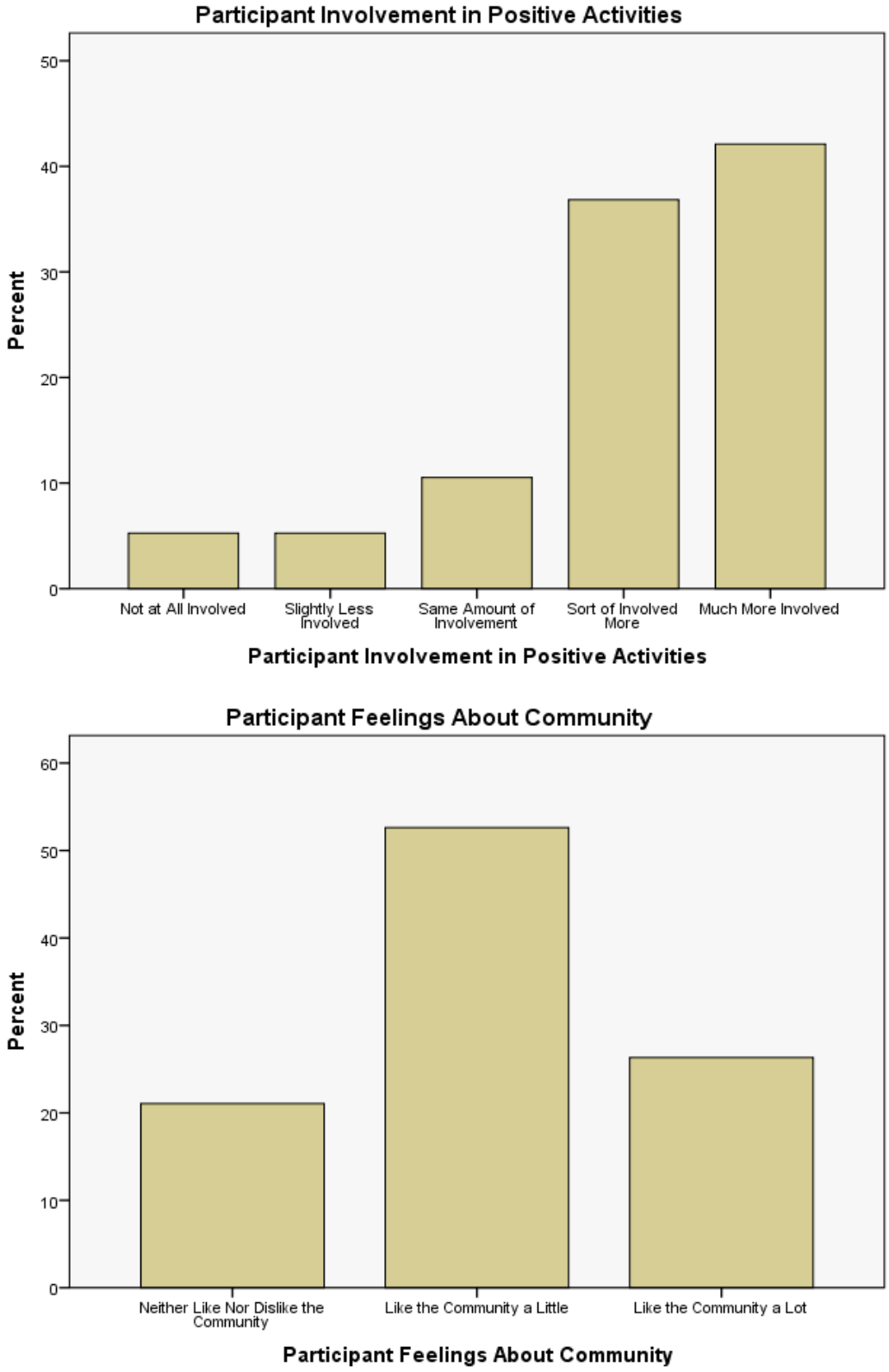

Figure 8. These two figures show the youth involvement in positive activities (top) and feelings about community, as measured by the post intervention survey.

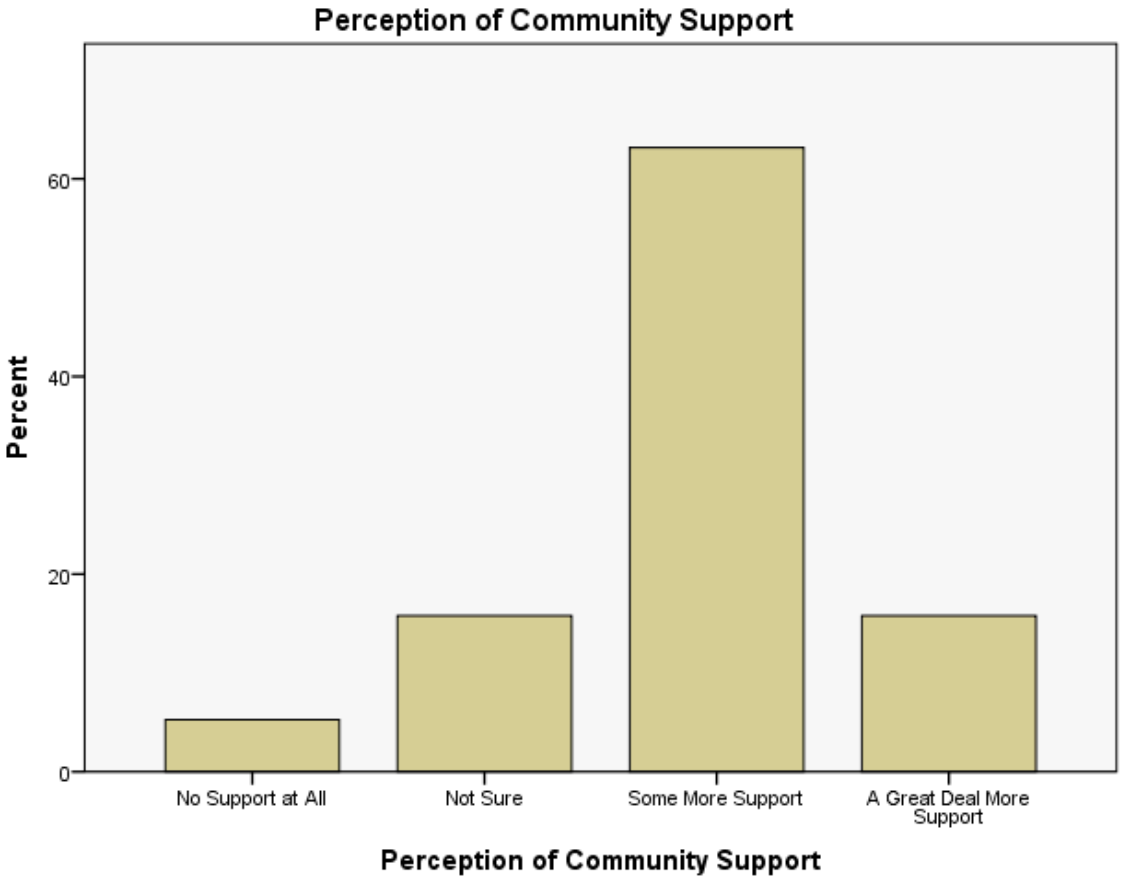

Figure 9. This figure shows the youth perception of community support, as measured by the post intervention survey.

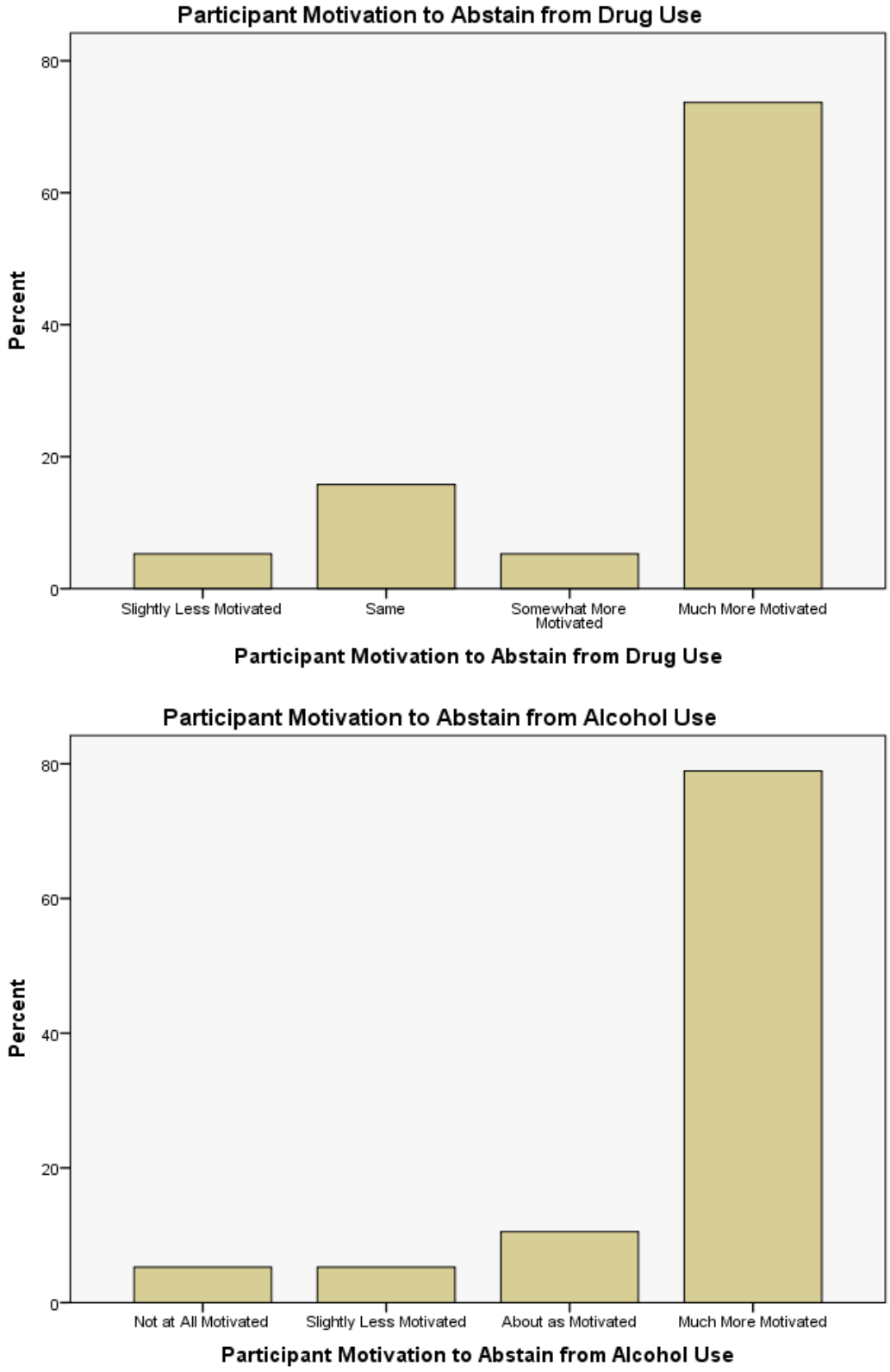

Figure 10. This figure shows the youth motivation to abstain from drug use (top) and alcohol use, as measured by the post intervention survey.