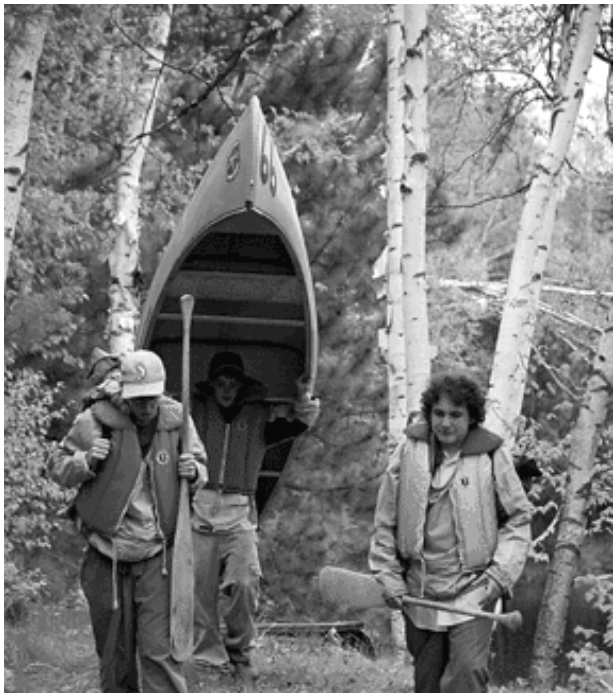
Evaluating the Effects of the Project DARE Program on Young Offenders



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EXECUTIVE SUMMARY

Project DARE (PD) is a continuous intake open custody program for male youth. PD works to develop the attitudes and skills necessary for adjudicated youth to become responsible, accountable law-abiding citizens through an intensive group-based experiential education and wilderness adventure program design. Each youth is referred by a probation officer to a minimum placement term of 45 days, with a preferred placement duration of 120 days. This report presents results of an evaluation of Project DARE that examined three types of rehabilitative outcome: 1) perceptions of the program and process, including what young offenders believed they learned from the experience, 2) changes in their well being utilizing the Youth-Outcome Questionnaire, and 3) rates of re-offending at an average of 16.3 months after release from custody.

Results suggest that the 57 youth study participants indicated a positive attitude towards PD and rated the school program, challenge activities, and relationships with staff as the most important aspects of the program. When asked an open-ended question of what they had learned from PD, four central themes emerged from analysis of their responses: a) Skill Development, such as wilderness expedition and problem solving skills; b) Sense of Self/Confidence, which referred to an enhanced sense of self confidence from completing difficult challenges; c) Dealing with Frustrations, which referenced newly learned anger management skills; and d) Interpersonal Skills, which referred to learning to live in a community with others. The themes Dealing with Frustrations and Interpersonal Skills were referenced by the majority or participants and reflect two central goals of Project DARE: 1) to help young offenders learn to deal with their anger appropriately and 2) to develop skills that enable them to get along better with others.

A total of 39 youth provided Y-OQ scores at admission and discharge from PD which averaged 108 days. The average admission score was 81.56, indicating a score slightly higher than what Burlingame et al. (1995) classify as an "outpatient sample" (p. 5). This means that these youth have significant mental health symptoms similar to youth receiving outpatient treatment care by licensed professionals. The normal range of Y-OQ scores is between 23 and 46. This suggests that though the youth participating in this study were not seeking "treatment," they scored statistically higher than "normal" populations. The average discharge score was 73.32, indicating an average individual score reduction of 8.23. This difference in scores was *statistically significant* ($t(33) = 4.214$, $p < .001$) with a moderate effect size ($d = .5316$), suggesting significant improvement in youth well-being from participation in Project DARE. Analysis of Y-OQ subscales showed significant improvement in two areas: 1) Interpersonal Relations, and 2) Social Problems.

Parents, and when not available, probation officers assigned for each youth were contacted at an average 16.3 months after release from Project DARE to determine if they had committed an offense. Of the 39 youths in the sample, 20 (52%) had re-offended, including those charged for administrative offences such as breaching conditions of probation, while 19 (48%) had not. According to Thomas et al. (2002), in a study of repeat offenders ages 18-25, 60% of all youth in corrections will re-offend, and the mean number of convictions for youth who first offended at 12-13 years of age was 7.7. The average age of first offense for this population was 13.9 years with an average 7.78 prior convictions; 90% had a prior convictions, and 70% had been sentenced to a custodial disposition before being sentenced to PD. This study highlights the myriad challenges of working with this population of young offenders.

In conclusion, PD appears to be an effective intervention to help improve anger management and social skills of young offenders referred to the program. During their stay, a significant improvement in emotional and behavioral well-being was demonstrated as evidenced by significant score reduction on the Y-OQ. However, their discharge scores still reflect youth in need of treatment and further aftercare. Recommendations include increasing resources to help youth transition to family, peer and school/work environments after release from custody, as well as improved aftercare services to help reduce the likelihood of re-offending.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

The past decades have seen a steady rise in youth participation in and severity of high-risk behaviors such as alcohol and other drug use, tobacco use, violence, and irresponsible sexual activity (Stevens & Griffin, 2001). The latest survey results of youth in the United States indicate that youth are not simply experimenting in risk behaviors, but rather forming, at an alarmingly early age, ingrained life habits that are detrimental to their life success (Stevens & Griffin, 2001). Consequently, there has also been a rise in the adjudicated youth population and severity of juvenile offenses over this time (Daley, 2001). As the number of juvenile offenders rises and the complexity of the factors and issues contributing to offenses is elucidated through research, many states in the US and provinces in Canada are beginning to recognize the need for alternative programming in juvenile justice systems (Wolford, 2000). This is coupled with the assertion that in general, most programs administered by the juvenile justice system are ineffective (Cook & Spirrison, 1992; Minor, 1990), and that repeat offenders or recidivists account for the majority of official delinquency (Kauffman, 1990; Thomas, Hurley, & Grimes, 2002).

Adjudicated youth are characterized as under the age of majority who have violated the law or committed a status offense and have been processed through the juvenile justice system in some way (Scott, 2002). There are several contributing factors common to juvenile offenders such as: ethnic minority status, aggressive and antisocial behavior, difficulties in school or school failure, and family stress (Daley, 2001; Scott, 2002). Researchers also note that early initiation of alcohol and other drug use, tobacco use, and irresponsible sexual behavior are common factors among adjudicated youth (Daley, 2001; Pesta, 2002; Scott, 2002; Stevens & Griffin, 2001). These factors and others interact with one another, making it difficult to determine on which factor to focus prevention programming or rehabilitation efforts.

Adjudicated youth often lack adequate communication skills, anger management techniques, conflict resolution skills, and prosocial decision-making processes (Pesta, 2002). Stevens & Griffin (2001) note that youth who have demonstrated involvement in high-risk behaviors, such as adjudicated youth, need to evaluate their feelings about their behavior and to learn and practice the skills to help them make "good decisions." Project DARE (PD), a unique program operating in the province of Ontario, was developed to help young offenders address many of the issues that drive their anti-social behavior by combining a positive learning community approach with adventure programming and wilderness expeditions to help young offenders complete their sentences and again become productive members of society.

Project DARE is operated by Wendigo Lake Expeditions Inc. under contract with the Government of Ontario, Canada. PD has operated for over thirty years as a unique, successful and highly respected residential program for Ontario's youth-at-risk. The acronym DARE stands for Development through Adventure, Responsibility and Education. Project DARE is located approximately three hours north of Toronto, Ontario, on the edge of Algonquin Park. PD's core service is a continuous intake open custody program for male youth. PD promotes the development of the attitudes and skills necessary to become responsible, accountable law-abiding citizens through an intensive group-based experiential education and wilderness adventure program design. The program continuously challenges students through four inter-related and integrated activity components - wilderness expedition, challenge activities, community service and school. Each youth must be referred by his probation officer. The minimum placement term is 45 days and the preferred placement duration is 120 days. This study presents an opportunity to test what has been termed the "responsivity principle," which refers to the "delivery of treatment programs in a style and mode that is consistent with the ability and learning style of the young offender" (Andrews & Bonta, 1998). This principle

suggests that young offenders are human beings and the most powerful strategies available are behavioral, social, and cognitive strategies consistent with Project DARE's approach.

Purpose of the Study

This report presents results of an evaluation of Project DARE that examined three types of rehabilitative outcome: 1) perceptions of the program and process, including things young offenders believe were learned from the experience, 2) changes in their well being utilizing the Youth-Outcome Questionnaire (Y-OQ) (Burlingame et al., 1996; Lambert & Cattani-Thompson, 1996; Lambert, Ogles, & Masters, 1992; Lambert, Huefner, & Reisenger, 1996; Russell, 2000; Wells, Burlingame, Lambert, Hoag, & Hope, 1996; Wells, 1990), and 3) re-offense rates at an average of 16.3 months after release from Project DARE.

PROJECT DARE: AN INTEGRATED APPROACH

Project DARE (PD) seeks to create a positive learning community that is conducive to the development of pro-social and coping skills by educational curricula and social skills training in an experiential manner. In addition to the positive learning community, PD integrates a wilderness expedition component to challenge young offenders to implement newly learned skills in a non-threatening environment. Specific characteristics of adjudicated youth are presented. This is followed by an outline of key elements that comprise a positive learning community to help frame PD's unique intervention strategy. PD also uses wilderness expeditions designed to augment this approach. This overview frames the evaluation of PD's intervention working with adjudicated youth.

Adjudicated Youth and Positive Learning Communities

It has been suggested that adjudicated youth are not getting the educational, mental health, or social support within traditional correctional systems that could allow them to be successful once they are released from custody (Daley, 2001). In an attempt to address this need, there have been several interventions and subsequent evaluations conducted on the effectiveness of various methods of improving social or life skills of adjudicated youth (Donlevy, 2001; Leiber & Mawhorr, 1995; Platt, 1996; Scott, 2002; Taylor, 1999). Researchers have identified the following methods as appropriate for reducing aggressive behavior and increasing pro-social behavior: prosocial skills training, social competence training, interpersonal skills training, cognitive behavior instruction, and behavior modeling/modification techniques (Pesta, 2002; Wilson & Lipsey, 2000). Mundy (1997), in reviewing several programs targeting a reduction in anger or aggression, noted that they generally contain the following elements: identification of internal triggers and external triggers, awareness of physiological and/or kinesthetic cues, anger reduction techniques, and social skills that provide alternative responses.

Positive learning communities have also been proposed as a vehicle to help facilitate positive development of youth through six essential features which are often used as general outcome goals: self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth (Roth & Brooks-Gunn, 2003). The National Research Council has identified common opportunities that should be provided by a youth development setting. Youth need physical and psychological safety and structure as well as supportive relationships. Opportunities to belong to an organization or community that supports positive social norms and provides opportunities for skill building are essential. The most successful youth development programs integrate family, school, and community efforts in order

to meet the needs of the child in multiple areas of his/her life (Roth & Brooks-Gunn, 2003). A positive learning community, relying on the integration of experiential learning methods and activities into educational curriculum, provides skills and knowledge building opportunities. It is proposed that these experiential learning opportunities, integrated with an educational and social structure, are appropriate for adjudicated youth.

In conclusion, PD represents a positive learning community that seeks to facilitate the development of social skills through an experiential curriculum that is appropriate for adjudicated youth. PD augments this approach by using wilderness expeditions, designed to challenge and create a unique physical and social environment that allows participants the opportunity to practice newly learned behaviors in a neutral and safe environment. In this way, PD is utilizing the benefits of a positive learning community as outlined above, and principles and factors reasoned to be at work in wilderness experience programs, which have been found to have positive effects on youth participants (Hattie, Marsh, Neill, & Richards, 1997; Russell, 2003).

Wilderness Expeditions

Wilderness expeditions offer healthy exercise and diet through hiking and physical activity, psycho-educational curricula, solo and reflection, and individual and group discussion sessions that facilitate a form of therapeutic alliance among youth, therapists and wilderness leaders that is unique in mental health practice (Russell & Phillips-Miller, 2002). The therapeutic process inherent in these wilderness expeditions has been termed wilderness therapy, which has been defined by Crisp and O'Donnell (1997) as "generic group therapy and group system models, inter-personal behavioral models, the experience of natural consequences, and modified group psychotherapy applied into a wilderness activity setting" (p. 6). There are over

100 such programs currently operating in the United States and Canada that serve over 10,000 youths and their families (Russell, 2003). Key therapeutic factors that facilitate change for individuals while on expedition include: a) the promotion of self-efficacy through task accomplishment facilitated by natural consequences in wilderness living (Hans, 2000), b) a restructuring of the staff-youth relationship (Russell, 2001), and c) the promotion of group cohesion and development through group and outdoor living (Bandoroff & Scherer, 1994; Davis Berman & Berman, 1994; Russell, 2001). Each of these factors are briefly reviewed.

Promotion of Self Efficacy through Task Accomplishment

Psycho-educational approaches that focus on gradual development of self competence in relation to real-life problems and settings have been shown to have optimal effects (Brown, Stetson, & Beatty, 1989). The gradual development of self efficacy in wilderness treatment is accomplished through numerous daily living tasks that are real, immediate and concrete, and which become increasingly difficult as the process unfolds. Self efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events in their lives and is mediated through cognitive, motivational, affective and selection processes (Bandura, 1994). Research on the effects of wilderness treatment programs on self efficacy has focused on task specific domains of self efficacy and has shown that wilderness programs can enhance certain aspects of self efficacy within a narrow task-specific domain. Hans (2000) conducted a meta-analysis of the effects of wilderness and adventure programs on locus of control and found that subjects across all studies became significantly more internal and self efficacious as a result of participation in programs. More importantly, the meta-analysis concluded that adventure programs with a goal of primary therapy (reflecting PD's approach) had a significantly higher mean effect size (0.64) than those that reported goals of

education or development (0.35) (p. 47). Hattie et al. (1997) also noted enhanced self efficacy and self-concept in a meta-analysis of the effects of adventure and wilderness programming on participants.

Restructuring of the Staff-Youth Relationship

The wilderness expedition leadership team also engages in the same wilderness experience as the youths, eating the same foods and sleeping under the same tarps, restructuring the mentor/therapist and youth relationship with which most youths are accustomed from previous correctional programs. As Gass (1993) states, "…while still maintaining clear and appropriate boundaries, [staff] become more approachable and achieve greater interaction with youths" (p. 9). Because of this unique relationship that is built with the wilderness expedition leaders, discussion and discourse can often occur without the constraints of time and accustomed roles found in many traditional correctional and therapeutic treatment environments. Russell (2002) qualitatively examined four OBH programs that utilize wilderness therapy and found that a key treatment process factor noted by youth case studies was the enhanced therapeutic relationship with staff. Subjects noted that therapists and wilderness leaders were easy to talk to and helped them identify core issues driving their problem behaviors.

Promotion of Group Cohesion and Development through Group Living.

Most youth in criminal justice systems have substance abuse or dependence issues that are an important focus of their rehabilitation (Daley, 2001). Peer influences are perhaps the most powerful predictor of adolescent substance abuse and are a developmentally appropriate factor to integrate into treatment strategies (Winters, Latimer, & Stinchfield, 1997). Moreover, those approaches that utilize the peer influences have been shown to be more effective in reducing the frequency of substance use after treatment (Bangert-Drowns, 1988). Wilderness expeditions

facilitate these factors through group and communal living in the outdoors requiring communication, patience and trust. Group cohesion and development throughout the experience help establish a set of norms and expectations which play key roles in helping the youth develop a healthy prosocial identity (Erikson, 1963). Peer feedback facilitated by enhanced group cohesion found in the unique and intense living experience plays a key role in treatment (Hattie et al. 1997). Examples of activities that facilitate the development of group cohesion include cooking and completing numerous other tasks in teams, psycho-educational group counseling sessions and the processing of inevitable group conflicts that arise. Those who have experienced deep concern about their sense of worth and their ability to relate to others are empowered through these processes (Russell & Phillips-Miller, 2002).

RESEARCH ON PROGRAM EFFECTIVENESS

Research on the effects of programs similar to Project DARE have shown that residential programs with a positive learning community approach integrated with wilderness expeditions can have positive effects for youth participants. Three types of literature are reviewed and are relevant to this study: 1) general effects of wilderness programs on adjudicated youth, 2) effects of wilderness programs on recidivism, and 3) other studies that have utilized the Youth Outcome Questionnaire to place into context potential findings from this study.

Studies on the effects of wilderness treatment programs have reported two types of outcomes from participation that have been corroborated in meta-analyses: a) personal development, including enhanced dimensions of self-concept and a more internalized locus of control (Hans, 2000; Hattie et al., 1997), and b) interpersonal development and the development of appropriate and adaptive social skills (Hattie et al., 1997). These meta-analyses have also shown that programs with therapeutic intentions (similar to PD program primary objectives) for

troubled youths also have shown larger effect sizes than wilderness programs for recreation or personal growth (Hans, 2000; Hattie et al., 1997). Despite reports of positive benefits and documented growth in the number of wilderness programs serving youths in the last decade, systematic reviews of research emphasize the lack of a theoretical basis in most studies, the poor psychometric properties of instruments used to assess outcome, methodological shortcomings, and a general lack of comparable findings (Cason & Gillis, 1994; Gillis, 1992; Hattie et al., 1997; Winterdyk & Griffiths, 1984).

In a recent study conducted on the effectiveness of eight wilderness treatment programs, Russell (2003) found that youth participation in wilderness treatment significantly reduced behavioral and emotional symptoms of youths immediately following treatment, as measured by both youth self-report and parent assessments using the Youth Outcome Questionnaire (Y-OQ). More importantly, this study reported that youths maintained therapeutic progress initiated by treatment, and according to youth self-report data, continued to improve at the 12-month follow-up period.

Recidivism Studies

A review of the criminology literature reveals only a few studies published on the effects of wilderness programs on adolescent recidivism. A review of studies in the 1970s and 1980s linked wilderness programs with reduced recidivism, reduced frequency of deviant behaviors, and fewer arrests (Winterdyk & Griffiths, 1984). Greenwood and Turner (1987) compared 90 male graduates of the VisionQuest adjudicated program with 257 male juvenile delinquents who had been placed in other probation programs, and found that VisionQuest graduates had fewer arrests. Further evidence in support of VisionQuest's effectiveness is provided in a study by Goodstein and Sontheimer (1987) found an arrest rate for VisionQuest graduates of 37 percent,

compared to an arrest rate for control programs of 51 percent. A more recent study by Castellano and Soderstrom (1992) evaluated the effects of the Spectrum Wilderness Program, a 30-day "Outward Bound" type of wilderness challenge program, on the number of post-program arrests. They found reduced arrests among graduates, which lasted for about one year after the program. At this point, the positive program results began to decay to the point where they were no longer apparent.

Studies Conducted Using the Y-OQ

Several studies reported in the literature have evaluated treatment outcomes using the Youth-Outcome Questionnaire (Y-OQ). Though the studies reported different clientele and treatment, several insights can be drawn from the relative movement on the Y-OQ scale experienced by study subjects which serve as a reference to interpret the results of this study. Hagan (2003) assessed treatment outcomes using the Y-OQ and found that youth self-reports indicated no significant improvement from wilderness treatment, but found that parents and counselors did assess significant improvement. This finding suggested a discrepancy in the reporting done by youths and their parents, in that parents may want to see improvement in the youth and may rate them as more improved, whereas youths may be more conservative in their reporting of post-program effects. .

Two more recent studies on in-home, family centered psychiatric treatment (Mosier et al., 2001) and a partial-day treatment program for referred children (Robinson, 2000) were also identified. Both studies report parent assessment only of the effects of treatment from these interventions. Average score reductions for each evaluation suggested significant improvement in youth presenting symptoms, though the in-home family centered treatment showed almost double the reduction in symptoms. No other studies are reported in the wilderness treatment

literature that have used the Y-OQ.

METHODS

A repeated measure research design was used in this study (Graziano & Raulin, 1997). A census of 57 youths at Project DARE were evaluated during the time period of June 1, 2002 to June 1, 2003. Youth are sentenced to Project DARE by either a judge's decision in sentencing a convicted youth or are referred by a probation officer. The types of youth sentenced and referred are typically: a) those youth who have been in prior custody (90% of youth in this study had a reported prior conviction, 70% had been in prior custody, and this sample averaged 7.78 prior convictions before sentencing to Project DARE) because it is believed that Project DARE will offer an alternative program that requires more than just "serving their time," and/or b) those youth who are sentenced to a period of time minimally required for Project DARE (Project DARE requires a stay of at least 45-days). This means that Project DARE typically works with those youth who have been in the system and are receiving longer sentences, rendering them at significant risk for re-offense.

Upon arrival at Project DARE, parents or legal guardians of youths were asked to sign a research consent form. All the youths and their parents agreed to participate in the study. After initial agreement to participate in the study however, many of the youths failed to fully complete assessments. This is often the case working with this population of youth, whom are often resistant and defiant to authority. The confidentiality of parents or legal guardians and youths was maintained through the assignment of a code which was used throughout the data collection, analysis and reporting process.

Follow-up contact with youth was conducted on a set date (July 2004) by the staff of Project DARE over a one-week period. The reason each youth was not contacted at a set date

after release from custody (for example 6 months after their release) was due to limitations in staffing at Project DARE and funding for the study. It was simply too difficult for the program to contact each youth on a specific date that corresponded to their release date. Because each youth had a different length of stay (determined by sentencing rules), each participant had been out of custody for different periods of time. The average length of time for this assessment was 16.3 months after release from Project DARE. Though this is a limitation, it also offered a unique opportunity to assess recidivism from a longitudinal perspective, perhaps gathering more pertinent information as to long term effects of this kind of correctional programming. Each youth was assessed as to whether or not they had recidivated (defined as being charged with an offense, including breaching the terms of their probation order). This was done by contacting the parents, and when possible, their probation officer for each study subject, at which time they were asked to describe the well-being of the youth and whether or not they had been charged with an offense during this time period. Parents were contacted because most youth had been assigned another probation officer during this time because of their age (youth in Canada are assigned probation officers in phases, and when they reach 16 years old, they are reassigned), and the original probation officers simply did not know the current status of the youth. It did not appear as though parents were underreporting whether youth had been charged since leaving Project DARE. In fact, parents appeared eager to talk to Project DARE staff about their child's current status.

Instruments

Youth-Outcome Questionnaire. The Youth-Outcome Questionnaire (Y-OQ) contains 64 items which are summed across six content areas to produce a total score. The higher the Y-OQ score, the more serious the adolescent's symptoms. The Y-OQ has excellent psychometric

qualities (Burlingame et al., 1996). Estimates of internal consistency range from .74 to .93 with a total scale estimate of .96. Test-re-test reliability scores are also above .70, indicating moderately high temporal stability. High correlations exist between the Y-OQ total and subscale scores, and other frequently used assessment instruments (Wells et al., 1996). For example, scales on the Child Behavior Checklist (Achenbach, 1991) correlate highly with parallel sub-scales on the Y-OQ. Specific subscale reliability coefficients for three of the subscales, (Interpersonal Distress, Interpersonal Relations, and Behavior Dysfunction) are moderate to high (.69-.93) suggesting homogeneity of content within each subscale (Giranda, 2000). Internal consistency estimates are lower (.54 - .83) for the Social Problems, Somatic and Critical Incidents given the broader content tapped in these scales. These estimates are deemed suitable for making subscale comparisons (Burlingame et al., 1996).

The validity of the Y-OQ rests upon its ability to detect periodic change made by the client during treatment. The Y-OQ has a score range of -16 to 240. The higher the score, the more symptoms the youth exhibits. Then Y-OQ has identified score intervals that reflect three samples of youth: 1) normal sample (46 or lower), that represents normal populations of youth, 2) outpatient samples (47-79), that represents a sample of youth who have been referred to outpatient counseling, and 3) inpatient samples, (80 and higher), the most severe group that are referred to inpatient hospitalization or other secure mental health facilities. These sample populations serve as a guide and reflect the severity of well-being for research samples.

This study also utilized a questionnaire developed by Project DARE that asked respondents to evaluate various elements of the program. This questionnaire can be considered a treatment satisfaction assessment that simply asks youths to assess various program elements and the degree to which these elements were favorable or unfavorable. Examples include staff, educational curricula, wilderness expeditions, food, and living conditions.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS™). Data were first imported from the database into SPSS where they were assigned variable names based on the type of analysis to be conducted. Reliability analysis was performed on items contained in the PD questionnaire on program attributes. Average youth self-report scores were calculated, as well as average differences between admission and discharge scores. Average scores for the six content areas contained in the Y-OQ were also calculated so they could be compared to these composite scores. These average scores and differences were then correlated with subject demographics, such as age, whether the youth had a prior offense, number of offenses, and recidivism. Descriptive results from the treatment satisfaction questionnaire are also presented to illustrate the degree of satisfaction with Project DARE subjects indicated.

Limitations

There are several limitations to the study that should be noted. First, there is no control group or random assignment to Project DARE. Though this would have been ideal, there were several barriers to achieving permission to allow for this from youth justice administration levels and probation officers responsible for the youths. Another limitation is the small sample size due to relatively small number of youths being served by Project DARE in a one-year time period. This makes generalizations to a population of Canada's adjudicated youth difficult. Finally, of the 57 youth who initially agreed to participate in the study, partial data was obtained for 50 of these youth (88%), and complete data allowing within subject comparisons from 39 (68%). Though no significant non-response relationships were found across age, number of prior convictions, or age of first offense, this is also a limitation. Despite these limitations, a valid and reliable instrument was used, and primary data collection followed consistent protocol, rendering

the results and discussion useful in assessing and considering the impacts of an alternative program for youth in justice systems in Canada and the United States.

RESULTS

The 57 youth who agreed to participate in the study averaged 15.2 years of age. Length of stay averaged 108 days, ranging from 47 to 263 days. Youth participants had been in custody an average of 2.47 times prior to arrival at Project DARE, with over 30% having been in custody four or more times. Most were asked by parents or probation officers to attend Project DARE and had agreed to participate in the program (71%), with few indicating they were sent to the program against their will (13%). This sample of youth had an average risk/needs assessment conducted by the youth's probation officer prior to coming to Project DARE of 21.3, which places them in the moderate to high classification that indicates their likelihood of committing a re-offense based on personal, social, family, and socio-economic variables. Results are presented by 1) youth perception and lessons learned at Project DARE, 2) change in well-being as determined by a change in scores on the Youth Outcome Questionnaire from admission to discharge, and 3) recidivism rates.

Youth Perceptions of Project DARE

Mean scores for items on the discharge questionnaire indicate positive perceptions of Project DARE program by study participants (see Table 1). The highest rated program element was the school program, followed by challenge activities and the instructors. The two lowest rated items were the wilderness expedition and the program ceremonies.

Table 1. Perceptions of program elements evaluated by youth at discharge from the program based on a scale of 1-Very Negative to 4-Very Positive.

Program Element	Frequency	*M*	*SD*
School program	39	3.74	.446
Challenge activities	39	3.66	.539
Other support staff	39	3.51	.658
Instructors	39	3.43	.698
Program values	39	3.14	.772
Wilderness trip expedition	39	3.11	.832
Program ceremonies	39	2.91	.689

Study participants were also asked how safe they felt while in custody and the degree to which the program helped them in areas such as developing social skills, problem solving skills, and facilitating reflection on their lives. In general, youth felt they were kept safe by staff (M = 7.51 on an 8-point scale) and felt safe around other students (M = 7.11) and were treated with respect by staff (M = 6.91). Youth also indicated that Project DARE helped them with their education, the highest rated result in questions on attitudes toward specific elements of the program (M = 7.1). They felt less in agreement with the degree to which the program helped them feel better about themselves (M = 5.71) and taught them how to get along with others (M = 6.03). In general, study participants evaluated Project DARE favorably, felt safe while at the facility, and felt they learned valuable lessons from the experience.

What Youth Believed They Learned

Youth participants were also asked an open ended question at discharge that asked them to describe what they learned at Project Dare. These comments were transcribed and open and pattern coded using suggestions from Miles and Huberman (1994). Table 2 shows youth

responses coded into four central themes defined as: a) Skill Development, b) Sense of Self/Confidence, c) Deal with Frustrations, and d) Interpersonal Skills. The responses are then presented as they appeared on the discharge assessments. The themes Dealing with Frustrations and Interpersonal Skills were referenced by the majority or participants and reflect two central goals of Project DARE--to help youth deal with their anger appropriately and to learn to get along better with others. These findings represent youth recognition of this consistent effort by staff to provide tools and knowledge to help youth find more appropriate ways to deal with their anger and to work more effectively in a community. These skills can potentially help them in their family relations, school and work environments, and with their peers. Also of note was the development of self confidence, which is strongly supported in the literature as an outcome from participation in outdoor education programs, and recognition of outdoor living as a newly acquired leisure skill that may be drawn on in their future (see Hattie et al., 1997).

Table 2. Responses to the questions-What did you learn while at Project DARE?

Code	Youth Response
Development of Skills	-Just knots -A lot of outdoors skills -How to winter camp -How to survive in the wilderness -Everything -A lot of skills about camping and outdoor experiences -How to tie lots of knots and many wilderness skills -How to survive in the forest -How to portago and stuff. -How to be in the woods -To not be afraid of heights -A lot of hard skills and soft skills such as canoeing, -How to survive in the wilderness. -Dare has taught me how to survive in the wilderness
Sense of Self/Confidence	-That i can do things I never thought I could do -To be myself and stay on top of my bad habits -To belive in my self and being me. -How to be a leader -To challenge myself -How to push myself -Also to reach for your goals.
Dealing with Frustrations	-How to deal with my frustrations or with people that are bothering me. -That you cant flip out at stupid things or you will just end up back in custody -And self control -Deal with frustrations better, to have fun even if you don't win and alot of other things I can't think about at this moment. -How to deal with my problems better. -How to deal with frustrations in an appropriate manner -How to deal with frustration's in a positive way and help me gain alot of experience in different ways. -To deal with peer pressure, and to deal with some of my frustration. -To sopt and think before i do thing, I'm smarter than I though I was and have lots of patensh and skills -That I'm very patient and to use "Time & Place on the outside, also that hard work pays off. -To deal with my frustrations beter then I could before -That don’t sweet the small stuff -How to deel with my problems -How to servive thew to deal with frustrations -Dealing with anger and frustration some new ways to control my anger -Controlle my temper -How to cope with frustrations.
Interpersonal Skills	- Co-op with others -To show a spade when it's called a spade. -To deal with a hellish amount of discussions over a 3 month period. -How to work with people I dislike -Get along with others in and out of camp -To not only think about my needs but about others to. - A lot about being part of a community.

Assessing Change in Youth Well-Being

A total of 34 of the 39 study participants provided self report Youth-Outcome Questionnaire (Y-OQ) scores at admission and discharge. The average admission score was 81.56, indicating a score close to what Burlingame et al. (1995), developers of the Y-OQ, refer to as score indicative of a "outpatient sample" (p. 5). This means that these youth have similar presenting symptoms as populations that are referred to outpatient treatment, such as periodic individual and group therapy sessions with licensed professionals. (see Table 3).

Table 3. Average discharge scores at admission and discharge for youth who graduated from the Project DARE program.

	N	***M***	***SD***
Admission Y-OQ Score	39	81.56	17.33
Discharge Y-OQ Score	39	73.32	14.95
Mean Difference in Score	39	8.23	11.39

The average discharge score was 73.32, indicating an average reduction per individual of 8.23. A pair-wise t-test showed a *statistically significant* reduction in Y-OQ scores for this sample ($t(38) = 4.214$, $p < .001$) with a moderate effect size ($d = .5316$), suggesting significant improvement in youth well-being from participation in Project DARE. Burlingame et al. (1995) suggest a score reduction of 13 or more points on the Y-OQ to be considered *clinically significant* change. This suggests change that may be more stable and thus, reliable within each individual. Though this was not observed in this sample, study participants did show statistically significant change from admission to discharge. Also of note is the high Y-OQ score reported by youth leaving the Project DARE program, some 27 points higher than the normal range of symptoms (Y-OQ score of 46). This suggests that these youth are still exhibiting significant psychological and emotional symptoms and should be considered at risk of recidivating.

Parents also assessed their child's well-being using the Y-OQ prior to enrollment in the Project DARE Program. A total of 23 assessments were gathered of the 39 youth and yielded some interesting results. The average reported score was 147.43 which indicates severe youth dysfunction. This score was significantly higher than the average youth-reported score of 81.56 ($t(38) = 8.98$, $p < .001$). This significant difference in scores is an interesting finding that parallels Russell's (2003) study that also found significant differences between parent and youth assessments at admission to a treatment or custody program. Reasons suggested for these differences include: 1) parents overrating their child's presenting symptoms, 2) youth under reporting their symptoms because they simply do not feel as though they have problems in their lives that need addressing, or 3) a combination of both. This is an interesting parallel finding that warrants future research.

Staff responsible for the primary care of each youth also completed a Y-OQ assessment at discharge from Project DARE. This was completed to serve as a "check" on youth-reported scores. Parents were not asked to complete the assessments because they had little or no contact with their child during this time. Moreover, it was reasoned that staff had significant contact with each youth during this time in a variety of contexts. Because different assessments were completed at admission (parents) and discharge (staff) difference scores were not analyzed. These scores do serve as a reference for the youth self report scores and were of interest to the study. Staff reported an average discharge score for the 39 youth of 63.87 which was significantly different than the youth self-reported score of 73.32 ($t(38) = -2.72$, $p < .01$). This means staff assessed youth as doing better than the youth self reports at discharge.

Assessing Change in Youth Well-Being According to Y-OQ Subscales

The Y-OQ assesses youth well-being across six domains embedded in the questionnaire as sub-scales (see Figure 1). Each sub-scale also has a normal, outpatient, and inpatient range of scores. Significant improvement in youth-well-being for a specific domain is achieved if a score is at or near the normal range for a particular subscale. For example, the Behavioral Dysfunction subscale contains 11 items in the questionnaire that are summed to produce a total score in that dimension, which assesses the youth's ability to organize tasks, complete assignments, concentrate, and handle frustration. By analyzing relative change within each subscale, it is possible to monitor which specific area youths may have demonstrated improvement and which areas indicated no change, or a regression.

Figure 1. Six Content Areas of the Youth Outcome Questionnaire

Content Area	Assesses
Intrapersonal Distress (ID)	Assesses change in emotional distress including anxiety, depression, fearfulness, hopelessness, and self harm.
Somatic (S)	Assesses change in somatic distress typical in psychiatric presentation, including headaches, dizziness, stomachaches, nausea, and pain or weakness in joints.
Interpersonal Relations (IR)	Assesses change in the child's relationship with parents, other adults, and peers as well as the attitude towards others, interaction with friends, aggressiveness, arguing, and defiance.
Critical Items (CI)	Assesses inpatient services where short term stabilization is the primary change sought: changes in paranoia, obsessive-compulsive behavior, hallucination, delusions, suicide, mania, and eating disorder issues.
Social Problems (SP)	Assesses changes in problematic behaviors that are socially related, including truancy, sexual problems, running away from home, destruction of property and substance abuse.
Behavioral Dysfunction (BD)	Assesses change in a child's ability to organize tasks, complete assignments, concentrate, handle frustration, including items on inattention, hyperactivity, and impulsivity.

Descriptive analysis of the subscales shows two domains where this sample exhibited significant levels of distress that are comparable to inpatient sample score (meaning youth who are entering inpatient hospitalizations have similar scores) calculated by Burlingame et al. (1995). These are the Interpersonal Relations and the Social Problems subscales, two domains characteristic of an adjudicated population. Table 4 shows that these two domains are also the area where this

sample showed a statistically significant reduction in scores, indicating significant improvement in these areas. This sample also exhibited low somatic symptoms (headaches, dizziness) and low symptoms comprising the Critical Items subscale (suicide ideation, hallucinations and paranoia).

Table 4. Subscale admission and discharge scores with average difference between admission and discharge and statistical signifance.

	Frequency	Average Admission	Average Discharge	Average Difference	Statistical Significance
Subscales					
Subscale 1 Intrapersonal Distress	39	22.34	20.18	2.00	-
Subscale 2 Somatic	39	5.03	5.00	.094	-
Subscale 3 Interpersonal Relations	39	18.53	16.50	2.00	[1]
Subscale 4 Social Problems	39	12.08	8.15	2.84	[2]
Subscale 5 Behavioral Dysfunction	39	19.36	18.15	.939	-
Subscale 6 Critical Items	39	6.30	5.48	.303	-

1. $t(38) = 3.198$, $p = .003$, $d = .634$
2. $t(38) = 3.487$, $p = .002$, $d = .958$

Assessing Recidivism Rates

Parents, and when not reachable, probation officers, of all youth who had completed Project DARE were contacted on average 16.3 months after completion of Project DARE. The goal was to determine if the youth had violated the conditions of their probation or been charged with a criminal offense after discharge from PD. Of the 39 youths in the sample who had complete Y-OQ scores at admission and discharge from Project DARE, 20 (51%) had been charged with an offense, while 19 (49%) had not. Based on voluntary information provided by some parents and probation officers (this information was not systematically obtained), a significant percentage of the youth had been charged with breaching the conditions of their probation, rather than being charged with an offense against people or property. A breach of probation can be for such things as failing to reside where directed, failing to maintain curfew,

failing to report to a probation officer, and other similar things which were not classified as a breach of the criminal code. The primary reason for tracking being "charged" for an offense rather than "committed" of an offense was to obtain more revealing data. This is because youth can be "charged" and wait six months or more for sentencing to occur. It was reasoned that assessing whether you had been charged would be a better indicator of recidivism at this point in time.

Table 5. Frequency of youth charged with a criminal offense at the follow-up assessment, including average age, average age of first conviction, average time since discharge, and average length of stay in project dare.

	N	Ave. Age	Ave. Age of First Conviction	Ave. Time Since Discharge* (months)	Ave. Length of Stay
Charged with offense during follow-up time period	20	14.7	13.3	17.0	113.2
Not charged with offense during follow-up time period	19	15.8	14.3	15.2	102.7

*Indicates the period of time after discharge from Project DARE that the youth was contacted to assess whether any charges had been filed against the youth during this period.

Table 5 reports age, the age at which the youth first committed an offense, time since discharge, and length of stays according to whether the youth had been charged or not at the follow-up time period. In addition, risk/need assessment scores, number of prior convictions, and other indicators were also analyzed to examine differences between these groups. There were no identified statistically significant differences between these variables that could help researchers better understand factors that predict youth recidivating. A non parametric Mann Whitney *U* test was conducted on the Social Problems subscale of the Y-OQ, indicating significant differences in the expected direction (z= -1.887, $p < .05$). This subscale assesses problematic behaviors that are socially related, including truancy, sexual problems, running away from home, destruction of property and substance abuse. The average rank for those charged was 20.3 on this subscale,

while those that were not charged had an average rank of 13.9 at discharge. This is an interesting finding and could serve as an indicator of recidivism in future assessments using the Y-OQ.. Recidivism rates for young offenders with one to two prior convictions has been estimated at 59% (Fedorowycz, 1992). However, this is considered to be a low estimate because it includes many low risk offenders who did not receive a custodial disposition for prior offenses. Higher estimates report rates of recidivism between 60% (Thomas et al., 2002) and 75% (Fedorowycz, 1992) for young offenders that exhibit risk/need characteristics similar to this study population. According to Thomas et al. (2002), in a thorough study of repeat offenders for the Canadian Centre for Justice Statistics, the age at which youth first offended has a significant impact on their likelihood to be repeat offenders. They found that the mean number of convictions for youth who first offended at 12-13 years of age was 7.7, while the mean number of convictions for those that first offended at 19 was 4.4. The average age of first offense for this population was 13.9 years, with 7.78 convictions and 90% had at least one prior conviction before coming to Project DARE, placing them at extreme risk for re-offense. Moreover, risk/need assessment data for this sample showed an average score of 21.3 which indicates that these youth were at moderate to high risk of committing a re-offense. Given these estimates and the characteristics of the study population, recidivism rates for this sample appear to be less than averages reported in the criminology literature.

CONCLUSIONS AND RECOMMENDATIONS

Young offenders who participated in Project DARE scored high on the Youth-Outcome Questionnaire at admission to the program suggesting significant distress and showed improvement during their stay based on significant reduction in Y-OQ scores from participation in the program. Two areas that the sample demonstrated significant improvement in were in the Interpersonal Relations and the Social Problems domains of the Y-OQ. When coupled with the analyzed open-ended responses, these results suggest quantitatively and qualitatively that Project DARE participants have learned skills that can help them better manage their anger and get along with others. For example, a key aspect of the Interpersonal Relations domain of the Y-OQ scale relates to how well youth interact with their friends, their level of aggressiveness, propensity to argue with others, and defiance. This sample demonstrated statistically significant change in this area and which was corroborated in their qualitative assessment of what they believed they learned at Project DARE. One youth said they learned "How to deal with my frustrations or with people that are bothering me," while another stated that they learned "that you can't flip out at stupid things or you will just end up back in custody." Taken together, these findings support an outcome that suggests that these youth have made progress in this area.

Also of note is the finding that youth rated Project DARE high on a number of program variables, including the school program, challenge activities, and the staff. This is an important finding that should not be overlooked. Also of note is that youth felt safe while they were in custody, an important objective of the Canada *Youth Criminal Justice Act* of 2003. These findings suggest that a positive learning community that focuses on social skill awareness and development allow youth to focus their energy on making progress and completing their sentence instead of fearing for their safety and well-being. The role that a safe environment

plays in facilitating outcomes for young offenders could be an area for future research.

This sample was considered at moderate to high risk for re-offense because of: 1) risk/need assessments completed by probation officers (the assessment usually pre-dating the offenses leading to the custodial disposition under which they attended PD, and therefore reasoned to be understating the level of risk), indicated a moderate to high risk of recidivism, 2) previous research conducted by Lodzinski (1993) reported a 57.6% re-offense rate for PD youth, 3) the average age of first offense was 13.9 years, and 4) 90% had at least one prior conviction 5) 70% had been sentenced to previous custodial disposition and 6) the sample averaged 7.78 convictions prior to entering PD. Table six illustrates additional risk factors associated with Project DARE young offenders that further illustrate factors that place these youth at risk identified in a recent study completed by Cesaroni & Petersen-Baldi (2004).

Table 6. Characteristics of Project DARE young offenders.

Risk Factor	Percent of Population
With mom only	48.1
Suspended from school	79.2
Uses alcohol	66.7
Uses drugs	88.9
Friends in trouble with police	83.3
Past year homeless	18.5

Despite these sample characteristics, slightly more than half (51%) of the study participants had been charged with a criminal offense an average of 16.3 months after leaving Project DARE, while 49% had not. Unfortunately, information surrounding their offenses was not systematically obtained due to issues of confidentiality to examine the type and nature of the

offense. Despite this limitation, PD's recidivism rates compare favorably with published recidivism averages, especially given characteristics of the study sample.

This study presented an opportunity to test the responsivity principle, which refers to the "delivery of treatment programs in a style and mode that is consistent with the ability and learning style of the young offender" (Andrews & Bonta, 1998). This principle suggests that young offenders are human beings and the most powerful strategies available are behavioral, social, and cognitive strategies, similar to the approach being used by Project DARE. Based on the results of this study, PD appears to be an effective intervention for young offenders. This is based on the summary of results that suggest the following outcomes from participation in the program: 1) young offenders rated various program elements high, including the school program, adventure activities, and the staff and felt safe in the program, 2) young offenders believed PD helped them develop anger management and social skills and provided them an opportunity to practice them in a neutral and safe environment, 3) young offenders showed a significant reduction in Y-OQ scores, especially in the areas of Interpersonal Relations and Social Problems, and 4) recidivism rates favored comparably with other young offenders in custody.

There are three key recommendations provided which may enhance the likelihood of favorable outcomes and reduce the likelihood that young offenders participating in Project DARE will re-offend after release from custody.

Recommendation 1. Continue to focus on social skill development and awareness and provide opportunities to practice these skills in a variety of environments. The study sample primarily reported the development of social skills as something learned from their experience at PD. The development of these skills, which are lacking in this population, are critical to their success (Spence, 2003). PD's positive learning community integrated with adventure and wilderness expeditions appears to be an appropriate strategy for developing these

skills and awareness. This area could also be the focus of a more detailed study examining the development of these skills and the role they play in helping youth after release from custody.

Recommendation 2. Provide clinical oversight for Project DARE rehabilitation model given presenting symptoms of young offenders. This population presented with significant mental health issues as indicated by their high Y-OQ scores. These symptoms may be even more severe, as evidenced by parent assessments that were significantly higher than the youth self-report scores. Clinical oversight by a licensed mental health worker may provide needed direction and guidance for staff who may not have the requisite skills or training to effectively deal with some of these issues. Hattie et al. (1997) found in a meta-analysis of program outcomes that adventure and wilderness programs with clear "therapeutic intent" had significantly higher effect sizes than those that did not.

Recommendation 3. Develop strategies for young offender that outline what each has learned and how these lessons can reduce the likelihood of committing a re-offense. Similar to aftercare plans used in mental health and substance treatment programs, these plans can be detailed "roadmaps" for young offenders that can highlight potential challenges and opportunities to their success after release from custody. Examples can include contracts with parents or custodial authorities that outline appropriate behavior, strategies for dealing with substance use and peers, and support networks that can be accessed in times of need. If these plans are developed in collaboration with a mental health professional, their likelihood of success is increased (Hattie et al, 1997).

Recommendation 3. Identify aftercare services for young offender that provide needed structure and support to continue to help youth maintain progress made in custody. This sample indicated that they had learned several skills at PD and analysis of Y-OQ scores indicated a significant change in their ability to relate to others and deal with social problems.

The use of aftercare services are critical components of treatment and custody programs for youth and significantly increase their likelihood of success if they are utilized on a regular basis (Russell, 2005). This sample showed steady progress, especially in developing social skills during their stay at PD. If reinforcement of these ideas through aftercare and follow-up services is not made available to youth, many will regress quickly given the myriad risk factors present in their daily lives.

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