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EVALUATING THE EFFECTS OF THE WENDIGO LAKE EXPEDITION PROGRAM ON YOUNG OFFENDERS

Keith C. Russell
University of Minnesota

This study reports an evaluative case study of Wendigo Lake Expeditions (WLE), a continuous intake, open custody program for young offenders that uses a positive youth development approach. Four objectives guided the case study: (a) describe and illustrate WLE's approach to working with adjudicated youth, (b) identify and report perceptions of the program and process, (c) assess changes in their well-being utilizing the Youth-Outcome Questionnaire (Y-OQ), and (d) track postprogram recidivism rates. Results indicated a significant improvement in youth well-being indicated by significant score reductions on the Y-OQ. Of the 40 youths contacted at the follow-up assessment, 21 (53%) had been charged with a criminal offense during this period, including those charged for administrative offences such as breaching conditions of probation, whereas 19 (47%) had not been charged. Implications of positive youth development programming for adjudicated youth are discussed.

Keywords: *adjudicated youth; positive youth development; outcome evaluation*

The past decades have seen a steady rise in youth participation in and severity of high-risk behaviors such as irresponsible sexual activity, violence, and alcohol, drug, and tobacco use (Stevens & Griffin, 2001). The latest risk survey of youth in the United States indicates 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 (Centers for Disease Control and Prevention, 2004). Though the number of juvenile arrests have declined 17.5% during the years 1994 to 2003, several types of arrests have shown increases. These include assault (+10%), drug abuse violations (+19%), driving under the influence (+33%) and disorderly conduct (+13%; U.S. Department of Justice, 2003). Moreover, researchers have called the recidivism, revocation, and recommitment of juvenile parolees "unacceptably high" (Wiebush, Wagner, McNulty, Wang, & Le, 2005), with some studies reporting that more than 90% of juvenile offenders had been arrested as adults and approximately two thirds had been sentenced to prison (Office of the Auditor, 1995). As these trends continue, juvenile justice systems are recognizing the need for change and searching for alternative programming to address issues of violence and substance use in juvenile justice populations (Latessa, 2004; Wolford, 2000).

Adjudicated youth are characterized as younger than the age of the majority who have violated the law or committed a status offense and have been processed through the juvenile justice system in some way. 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 (Scott et al., 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 (Leiber & Mawhorr, 1995; Pesta, Respress, Major, Arazan, & Coxe, 2002; Scott et al., 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. Stevens and 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.

Wendigo Lake Expeditions (WLE) is a unique program operating in the province of Ontario, Canada, that was developed to help young offenders specifically address many of the issues underlying their antisocial behavior. The program combines a positive youth development approach with adventure programming and wilderness expeditions to help young offenders learn and practice prosocial skills in a safe and nurturing environment. WLE operates under what has been termed the "responsivity principle," which refers to the delivering of custody programs in a way that is consistent with the needs of young offenders (Andrews & Bonta, 1998). This principle reflects a positive youth development approach (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004) that recognizes youth potential and utilizes behavioral, social, and cognitive strategies that are reasoned to be consistent with WLE's approach.

Purpose of the Study

This evaluative case study of WLE examined the process and outcomes of the program, including (a) a detailed program description, including the use of "The Group," wilderness expedition, challenge activities and community service, and the school program; (b) perceptions of the program and process, including lessons young offenders believe were learned from the experience; (c) changes in their well-being utilizing the Youth-Outcome Questionnaire (Y-OQ; Burlingame et al., 1996; Lambert & Cattani-Thompson, 1996; Lambert, Huefner, & Reisinger, 1996; Lambert, Ogles, & Masters, 1992; Russell, 2000; M. G. Wells, Burlingame, Lambert, Hoag, & Hope, 1996; S. E. Wells, 1990); and (d) whether or not the youth had been formally charged with an offense since leaving WLE. Because the sample included in this study was relatively small ($N = 57$), the results are not intended to be an in-depth study of outcomes. Rather, the study seeks to shed light on the unique approach utilized by WLE, to gather perceptions by young offenders, and to identify potential outcomes from this type of approach. Because of these objectives, this study is considered to be exploratory in nature.

WLE: An Integrated Approach

WLE has developed an approach that reflects the central tenets of positive youth development as outlined by Damon (2004) to develop prosocial and coping skills through educational curricula and social skills training in an experiential manner. WLE uses adventure activities and wilderness expeditions to challenge young offenders to try newly learned

skills in a safe and neutral environment. Specific characteristics of adjudicated youth are presented and followed by an outline of key elements of a positive youth development approach integrated with adventure and wilderness activities that help frame WLE's strategy for working with young offenders.

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 the custody. 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, Kaczynski, & Lefebvre, 1996; Scott et al., 2002; Taylor, Eddy, & Biglan, 1999; Todis, Bullis, Waintrup, Schultz, & D'Ambrosio, 2001). Researchers have identified several methods that are appropriate for reducing aggressive behavior and increasing prosocial behavior, including prosocial skills training, social competence training, interpersonal skills training, cognitive behavior instruction, and behavior modeling or modification techniques (Pesta et al., 2002; Wilson, Lipsey, & Derzon, 2003). 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.

It is reasoned that the WLE program reflects the strategies outlined above by creating a residential community that is safe, supportive, and rife with opportunities to develop prosocial behavior through experiential and adventure-based curricula. WLE's mission statement reflects this assertion: "Wendigo Lake Expeditions promotes the development of the attitudes and skills necessary to become responsible, accountable law-abiding citizens by teaching five core values—responsibility, effort, attitude, community, honor." These core values are woven into a program that is organized into four developmental phases (Grey Jay, Otter, Wolf, Bear). Each phase has increasingly higher standards. With the passage of each stage comes community recognition, a ceremony for the achievement, and increasing levels of responsibility. The program components become the medium through which youth pass through these stages.

The Group

Each young offender is assigned to a "crew" of 10 youth on entrance into the program. All subsequent program activities are experienced in the group context, which is large enough for the emergence of conflict and small enough to allow for conflict resolution through open sharing and dialogue. At the beginning of the process, youth learn the expectations and core values of the program and set individual and group goals that are matched with increasing privileges. The goal is to shift motivation to succeed in the program from an external to a more internal orientation. A key element to the group is the use of daily discussions designed to practice prosocial skills in a neutral and nonthreatening environment under the guidance of trained facilitators and youth workers. For example, if a negative behavior in the group is identified, it becomes the focus of the discussion for the evening. Each member of the group is encouraged to offer his or her perspective as to the context and impact of the behavior, to identify ways to accept responsibility, and to propose appropriate consequences for the behavior. Through daily practice of these skills, in a variety of challenging environments, the group learns skills in communication, negotiation, cooperation, mutual respect, and support.

Wilderness Expedition

Approximately 40% of the youth's time at WLE is spent on expedition, engaged in activities such as backpacking, orienteering, snowshoeing, cross-country skiing, canoeing, sea kayaking, and solo. A youth with an average stay at WLE of 120 days will spend at least 48 of these on expedition. Expeditions serve as a practical, rather than theoretical, individual and group challenge, offering an opportunity to experience natural consequences. An example of a natural consequence occurs when a student does not pack his or her backpack correctly, which can slow the group down and make for a long day of hiking. Through involvement in planning the menu, caring for personal gear, practicing safety, and sharing the multitude of daily tasks required on expedition, the student learns a broad range of skills directly relevant to leading a productive and prosocial life.

Challenge Activities and Community Service

This aspect of the program involves a progression of activities that begins with games and trust exercises and ends with a high-element ropes course and rock climbing. These activities are done in the original groups and are designed to facilitate teamwork, communication, trust, and perseverance in the face of challenges. Interpersonal issues that may be occurring in the group from daily living are brought to the surface through the intensity of the challenges and are processed through structured facilitation that are related to the experience at WLE. Youth also complete two service projects in the Algonquin Park to give back to the community. Projects include maintenance of trails and campsites.

School Program

WLE integrates the credited educational curricula into all facets of the program. Certified teachers participate in and serve as facilitators in all aspects of the program including expeditions and challenge activities. Credit can be earned in physical education, science, and arts and crafts. On-site work placement in trades such as cooking and maintenance are also afforded participants.

Research on Program Effectiveness

Research on the effects of programs similar to WLE have shown that residential positive youth development programs integrated with wilderness expeditions can have positive effects for youth participants. Research has also shown methodological shortcomings and many times no real effect on recidivism, the dependent variable most often studied. A review of the literature highlights issues central to the process and expected outcomes from wilderness challenge programs and concludes with suggestions as to why these findings are apparent. Two types of literature are reviewed and are relevant: (a) general effects of wilderness programs on adjudicated youth and (b) effects of wilderness programs on recidivism.

Studies on the effects of wilderness programs on adjudicated youth have reported two types of outcomes from participation that have been corroborated in meta-analyses: (a) per-

sonal development, including enhanced dimensions of self-concept and a more internalized locus of control (Hans, 2000; Hattie, Marsh, Neill, & Richards, 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 WLE program primary objectives) for troubled youths have also 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 past 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; Wilson & Lipsey, 2000; Winterdyk & Griffiths, 1984).

Recidivism Studies

A review of the literature reveals only a few studies published on the effects of adventure and wilderness programs on adolescent recidivism. A review of studies in the 1970s and 1980s linked these interventions 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 was provided in a study by Goodstein and Sonthenhamer (1987), who reported an arrest rate for VisionQuest graduates of 37%, compared to an arrest rate for control programs of 51%. A study by Castellano and Soderstrom (1992) evaluated the effects of the Spectrum Wilderness Program, a 30-day, Outward Bound-type wilderness challenge program, on the number of postprogram arrests. They found reduced arrests among graduates, which lasted for about 1 year after the program. At this point, the positive program results began to decay to the point where they were no longer apparent.

In conclusion, the literature suggests that wilderness expedition and challenge programs woven into a positive youth development framework are appropriate and can provide positive outcomes for adjudicated youth. However, there is a noticeable lack of current research, and meta-analyses have reported mixed findings as to their relative effects. This may be because of several limitations often experienced when researching wilderness expedition-based interventions, including (a) the lack of a control group because of reported cost and ethical considerations, (b) small sample sizes because of program capacity, and (c) difficulties experienced researching participants in the field. Another reason there may be a lack of research in this area is that the number of programs being offered in judicial systems has fallen in recent years. Overall, approximately 120 wilderness-related rehabilitative programs exist in the United States, and fewer than 20 serve adjudicated youth (Russell, 2003). Wilson and Lipsey (2000), in their meta-analysis of wilderness programs, say that there is not enough consensus from existing research to support or refute whether wilderness programs are or are not effective in promoting positive outcomes. This study was conducted in this context and sought to explore the process and better understand the effects of WLE on youth participants.

Method

A case study method, which included the use of multiple sources of evidence to address the objectives (Yin, 1993), framed the study. These sources included student perceptions of the process, objective measures of outcome, and secondary sources that described prior youth disposition. All 57 youth sentenced to WLE during the time period of June 1, 2002, to June 1, 2003, were evaluated. Youth are sentenced to WLE by a judge's decision or are referred by a probation officer in Ontario. After sentencing or referral, the probation officer sends a completed Young Offender Services Information System report and a Risk Needs Assessment that assesses risk across types of offense, family circumstances, educational needs, peer relations, substance abuse, personality, and behavior. At this point, WLE assesses the appropriateness of the program for the young offender. Reasons for exclusion include serious suicidality, serious mental illness, a history of serious violence, or a history of arson. The types of youth sentenced and referred to WLE during this time period had a history of prior custody (82%) and averaged 7.57 prior convictions before sentencing. This means that WLE typically works with those youth who have been in the system and are receiving longer sentences, rendering them at significant risk for reoffense.

On arrival at WLE, parents or legal guardians of youths were asked to sign a research consent form. All 57 youth and their parents initially agreed to participate in the study. However, after initial agreement to participate in the study, many failed to fully complete assessments. This is often the case working with adjudicated populations. The confidentiality of parents or legal guardians and youths was maintained through the assignment of a code that was used throughout the data collection, analysis, and reporting processes.

Follow-up contact with youth was conducted on a set date (July 2004) by the staff of WLE during a 1-week period. The reason each youth was not contacted at a set date after release from custody (e.g., 6 months after release) was because of limitations in staffing at WLE and funding for the study. It was simply too difficult for the program to contact each youth on a specific date that corresponded to his or her 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 WLE. 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. It was very difficult to locate youth at this time. Despite these challenges, each youth was assessed as to whether or not he or she had recidivated (defined as being charged with an offense, which included any breach in the terms of his or her probation conditions). This was completed by contacting parents and, when possible, the probation officer for each study participant, at which time he or she was asked to describe the well-being of the youth and whether or not he or she had been charged with an offense during this time. 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.

Y-OQ

The Y-OQ contains 64 items that 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. Reliability scores are also above .70, indicating moderately high temporal stability. High correlations exist among the Y-OQ total and subscale scores and other frequently used assessment instruments (M. G. Wells et al., 1996). For example, scales on the Child Behavior Checklist (Achenbach, 1991) correlate highly with parallel subscales 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 on 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: (a) normal sample (46 or lower), which represents normal populations of youth; (b) outpatient samples (47-79), which represents a sample of youth who have been referred to outpatient counseling; and (c) inpatient samples (80 and higher), the most severe group who 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 WLE 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

Reliability analysis was performed on items contained in the WLE questionnaire on program attributes. Average youth self-report scores and average differences between admission and discharge scores were calculated. 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 participant 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 WLE participants indicated.

Limitations

There are several limitations to the study that should be noted. First, there is no control group or random assignment to WLE. 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 because of the relatively small number of youths being served by WLE in a 1-year period. This study does not seek to make generalizations to a population of Canada's adjudicated youth. Rather, it seeks to better understand the type of youth entering a program like WLE and what types of outcomes may be realistic. Finally, of the 57 youth who ini-

TABLE 1
Types of Convictions, Number of Convictions, and Average Convictions per Youth for
Youth Referred to Wendigo Lake Expeditions From June 2002 to June 2003

<i>Type of Conviction^a</i>	<i>Frequency</i>	<i>M</i>
Failure to comply	126	3.2
Assault	40	1.0
Possession of substances	7	0.18
Theft	80	2.0
Robbery	6	0.15
Traffic	13	0.33
Other	31	0.76
Total	303	7.57

a. Convictions were categorized based on broad interpretations of statutes from which convictions were reported. *Failure to comply* included convictions of failure to comply with probation and failure to appear. *Theft* includes convictions reported under theft, possession of stolen property, and breaking and entering. *Assault* included convictions under assault and assault with a weapon. *Other* included convictions of fraud, arson, mischief, trespassing, possession of a deadly weapon, and criminal negligence.

tially agreed to participate in the study, partial data were obtained for 50 of these youth (88%), and complete data allowing within-subject comparisons were obtained from 40 (70%). Though no significant nonresponse 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

A total of 57 youth participated in the study, with an average age of 15.2 years. Length of stay averaged 108 days, ranging from 47 to 263 days, based on sentencing rules. Youth participants had been in custody an average of 2.47 times prior to arrival at WLE, with more than 30% having been in custody four or more times. Most were asked by judges, parents, or probation officers to serve their time at WLE through sentencing or referral and had stated that they agreed to participate in the program in lieu of other sentencing (71%), with few indicating they were sent to the program as their only option (29%). Thus, youth were given options in their sentencing but were strongly urged to serve their sentence in the program. For the 40 youth who completed all instrumentation in this study, Table 1 outlines the types of prior convictions and reasons for referral to WLE. Study participants averaged 7.57 convictions, with the most common being failure to comply with the terms of probation, followed by theft and assault.

Results are presented by (a) a case study of a typical youth who comes to WLE, including background information obtained from the Risk Needs Assessment report and comments made by the youth on discharge from WLE highlighting lessons learned and the value of the program from his perspective; (b) a summary of common youth perceptions and lessons learned at WLE taken from discharge questionnaires; (c) change in well-being

as determined by a change in scores on the Y-OQ from admission to discharge; and (d) rates of reoffense at the follow-up period.

A Case Study

“Charlie” was 14 years old when he was sentenced to WLE. According to his Risk Needs Assessment report, Charlie was deemed a high risk for reoffense because of several factors that included (a) family circumstances and parenting, (b) educational challenges, (c) personality and behavior, and (d) low socioeconomic status. Charlie had a severe learning disability that made learning challenging for him, which had led to poor achievement in school, a low sense of self-esteem, a noted lack of social skills, and a personality that was described as “shy and withdrawn.” Charlie had no contact with his father and was being raised by a mother who was eager to have youth service agencies intervene on behalf of her son’s well-being. Charlie’s family issues were categorized as “significant family trauma.” Charlie had been twice convicted of assault and had a lengthy history of assault on authority. His goals for the program were to (a) increase self-control, (b) reduce the incidents of outbursts in residence and community, (c) develop prosocial skills, and (d) enhance self-concept to develop resiliency. Charlie was at WLE for 108 days.

Charlie scored a 97 on the Y-OQ at intake, which indicated severe pathology similar to adolescents who are admitted to inpatient settings (Burlingame et al., 1996). Charlie scored significantly higher than established cut scores on the Intrapersonal Distress, Interpersonal Relations, Social Problems, and Behavioral Dysfunction subscales of the Y-OQ (see Table 2 for subscale descriptions). At discharge, Charlie scored an 81 on the Y-OQ, a score that was reduced by 16 points, indicating clinically significant change. The greatest areas of improvement for Charlie were in the Intrapersonal Distress and Somatic subscales. Charlie did not show significant improvement in the Interpersonal Relations or Behavioral Dysfunction subscales. According to Charlie’s exit questionnaire, the items that he evaluated as “very positive” about WLE were the school program, the instructors, and the support staff. He wrote that WLE taught him to “deal with frustrations in a appropriate manner” and that he would change all the “group discussions” they had because “they got together for everything, and would rather have consequences handed out once in a while.” The items that he completely agreed with on the discharge questionnaire included “WLE has helped me feel better about myself,” “I was treated fairly and with respect by staff,” and “I felt safe around staff and while doing activities.” Items he was not in agreement with were “I would recommend WLE to other youth in custody” and “I’m glad I came to WLE rather than a traditional custody placement.” According to Charlie’s staff evaluation, Charlie’s prognosis to live prosocially and not commit future offenses was not good; he was evaluated as a significant risk for reoffense. Charlie was contacted 14 months after completion of WLE and had not reoffended. He was attending school and complying with the terms of his probation.

Youth Perceptions

Mean scores for items on the discharge questionnaire indicate positive perceptions of WLE program by study participants (see Table 3). 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.

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 and problem solving

TABLE 2
Six Content Areas of the Youth-Outcome Questionnaire

<i>Content Area</i>	<i>Assesses</i>
Intrapersonal Distress	Assesses change in emotional distress including anxiety, depression, fearfulness, hopelessness, and self-harm.
Somatic	Assesses change in somatic distress typical in psychiatric presentation, including headaches, dizziness, stomachaches, nausea, and pain or weakness in joints.
Interpersonal Relations	Assesses change in the child's relationship with parents, other adults, and peers and the attitude toward others, interaction with friends, aggressiveness, arguing, and defiance.
Critical Items	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	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	Assesses change in a child's ability to organize tasks, complete assignments, concentrate, and handle frustration, including items on inattention, hyperactivity, and impulsivity.

TABLE 3
Perceptions of Program Elements Evaluated by Youth at Discharge From the Program

<i>Program Element</i>	<i>Frequency</i>	<i>M</i>	<i>SD</i>
School program	40	3.74	.446
Challenge activities	40	3.66	.539
Other support staff	40	3.51	.658
Instructors	40	3.43	.698
Program values	40	3.14	.772
Wilderness trip expedition	40	3.11	.832
Program ceremonies	40	2.91	.689

NOTE: Based on a scale from 1 (*very negative*) to 4 (*very positive*).

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), felt safe around other students ($M = 7.11$), and were treated with respect by staff ($M = 6.91$). Youth also indicated that WLE 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 WLE 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 WLE. These comments were transcribed and open and pattern coded using suggestions from Miles and Huberman (1994). Table 4 shows youth responses coded into four central themes defined as (a) skill development, (b) sense

TABLE 4
Responses to the Question, "What Did You Learn While at WLE?"

<i>Code</i>	<i>Youth Response</i>
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 portage 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 Problem solving
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 believe 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 can't flip out at stupid things or you will just end up back in custody Self control Deal with frustrations better, to have fun even if you don't win and a lot 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 a lot of experience in different ways To deal with peer pressure, and to deal with some of my frustration To stop and think before I do things, I'm smarter than I thought I was and have lots of patience 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 better than I could before That doesn't sweeten the small stuff How to deal with my problems How to serve them to deal with frustrations Dealing with anger and frustration Some new ways to control my anger Control 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

TABLE 5
Average Y-OQ Scores at Admission and Discharge for Youth
Who Were Released From the Wendigo Lake Expeditions Program

	n	M	SD
Admission Y-OQ Score	40	81.56	17.33
Discharge Y-OQ Score	40	73.32	14.95
Mean difference in score	40	8.23 ^a	11.39

NOTE: Y-OQ is Youth-Outcome Questionnaire.

a. $t(33) = 4.214, p < .001, d = .5316$.

of self-confidence, (c) deal with frustrations, and (d) interpersonal skills. The responses are presented exactly as they appeared on the discharge assessments.

The themes dealing with frustrations and interpersonal skills were referenced by the majority of participants and reflect two central goals of WLE—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 peer relations. 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 on which they may draw in their future.

Assessing Change in Youth Well-Being

A total of 45 assessments were provided by youth at admission and 49 at discharge. After cleaning and screening the data for missing data points and outliers, a total of 40 youth provided self-report Y-OQ scores at both admission and discharge. The average admission score was 81.56, indicating a score close to what Burlingame et al. (1996) refer to as a score indicative of an “outpatient sample” (p. 5). This means that these youth have similar presenting symptoms as populations who are referred to outpatient treatment, such as periodic individual and group therapy sessions with licensed professionals (see Table 5).

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, $t(33) = 4.214, p < .001$, with a moderate effect size ($d = .5316$), suggesting significant improvement in youth well-being from participation in WLE. Burlingame et al. (1996) suggest a score reduction of 13 or more points on the Y-OQ 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 WLE 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 returning to preprogram levels of functioning.

TABLE 6
 Subscale Admission and Discharge Scores With Average Score Difference
 Between Admission and Discharge and Associated Statistical Significance

<i>Subscales</i>	<i>Frequency</i>	<i>Average Admission</i>	<i>Average Discharge</i>	<i>Average Difference</i>	<i>Statistical Significance</i>
Subscale 1					
Intrapersonal Distress	40	22.34	20.18	2.00	—
Subscale 2					
Somatic	40	5.03	5.00	0.094	—
Subscale 3					
Interpersonal Relations	40	18.53	16.50	2.00	a
Subscale 4					
Social Problems	40	12.08	8.15	2.84	b
Subscale 5					
Behavioral Dysfunction	40	19.36	18.15	0.939	—
Subscale 6					
Critical Items	40	6.30	5.48	0.303	—

a. $t(31) = 3.198, p = .003, d = .634$.

b. $t(30) = 3.487, p = .002, d = .958$.

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 subscales (see Table 2). Each subscale 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 in which specific areas youths may have demonstrated improvement and which areas indicated no change or a regression.

Descriptive analysis of the subscales shows two domains where this sample exhibited significant levels of distress that are comparable to inpatient sample scores. These are the Interpersonal Relations and the Social Problems subscales, two domains characteristic of an adjudicated population. Table 6 shows that these two domains are also the area where this sample showed a statistically significant reduction in scores, indicating improvement in these areas. This sample also exhibited low somatic symptoms (headaches, dizziness) and low symptoms composing the Critical Items subscale (suicide ideation, hallucinations, and paranoia).

Assessing Reoffense Rates

Parents and probation officers assigned for each youth were contacted on average 16.3 months after completion of WLE to determine if the youth had violated the conditions of his or her probation or been charged with a criminal offense after discharge from WLE. Of the 40 youths in the sample who had complete Y-OQ scores at admission and discharge from WLE, 21 (52.5%) had been charged with an offense, whereas 19 (47.5%) had not.

TABLE 7
 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 Wendigo Lake Expeditions (WLE)

	n	Average Age	Average Age of First Conviction	Average Time Since Discharge (months) ^a	Average Length of Stay
Charged with offense during follow-up time period	21	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

a. This indicates the period of time after discharge from WLE after which the youth was contacted to assess whether any charges had been filed against him or her during this period.

Table 7 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 period. In addition, risk or 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 predicted a youth's propensity to recidivate. A nonparametric 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, whereas those who 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.

According to Thomas, Hurley, and Grimes (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 or 13 years of age was 7.7, whereas the mean number of convictions for those who first offended at 19 was 4.4. The average age of first offense for this population was 13.9 years, and 82% of the sample had at least one prior offense, with an average of 7.57 convictions; these factors placed them at a high risk for reoffense. Moreover, risk or need assessment data for this sample showed an average score of 21.3, which indicates a moderate to high risk of committing a reoffense. Given these estimates and the characteristics of the study population, recidivism rates for this sample appear to be equal to or less than averages reported in the literature. However, because of the small sample size and difficulty obtaining reoffense conditions, limited conclusions can be drawn from these results.

Discussion

Young offenders who participated in WLE scored high on the Y-OQ 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 in which the sample demonstrated significant improvement were 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 WLE 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 relates to how well youth interact with their friends and their level of aggressiveness, propensity to argue with others, and defiance. This sample demonstrated statistically significant change in this area, which was corroborated in their qualitative assessment of what they believed they learned at WLE. One youth said he or she learned “how to deal with my frustrations or with people that are bothering me,” whereas another stated that he or she 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 WLE 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. Youth also indicated they felt safe while 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 allows 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. There are three key recommendations provided that may enhance the likelihood of favorable outcomes and increase the likelihood that young offenders participating in WLE will develop more prosocial behavior and not reoffend 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 WLE. The development of these skills, which are lacking in this population, is critical to their success (Spence, 2003). WLE’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: Develop strategies for young offenders that outline what each has learned and how these lessons can reduce the likelihood of committing a reoffense.

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 offenders 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 WLE, 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 is a critical component of treatment and custody programs for youth and significantly increases 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 WLE. 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.

Conclusions

Cesaroni and Petersen-Badali (2004) identified the following characteristics in a risk and needs assessment study of WLE youth: (a) 48% live with their mother only, (b) 79% had been suspended from school, (c) 67% use alcohol regularly, (d) 89% use drugs regularly, and (e) 83% had friends who were also in trouble with police. Despite these sample characteristics that indicate severe risk factors, 53% of the study participants had been charged with a criminal offense during a period that averaged 16.3 months after leaving WLE, whereas 47% had not. Charlie's story highlights the social and economic factors that contribute to the likelihood of a youth entering the judicial system at a young age. His story also highlights the challenges that a youth with a severe learning disability, in a single parent and low-income household, faces in trying to lead a prosocial life on release. With no follow-up other than periodic probation officer check-ins, the chances of Charlie thriving appear to be limited at best. Despite these challenges, Charlie managed not to reoffend. This was not the case for the other 53% of youth in this study. This is a telling result and one that requires a great deal more research and effort. What are the most effective follow-up strategies for adjudicated youth with similar backgrounds, and how can the judicial system implement these strategies with limited resources? A paucity of research exists that reveals what happens to youth when they leave secure facilities, other than statistical inferences as to their likelihood to recidivate (Todis et al., 2001). The challenges faced in trying to reintegrate into school and peer environments while also facing many of the same risk factors that led them to custody are immense.

This case study was guided by the responsivity principle, which theoretically examined the delivery of treatment programs in a way that was consistent with unique needs of young offenders (Andrews & Bonta, 1998). The principle suggests that an integrated strategy based on behavioral, social, and cognitive approaches is most effective for youth. Based on the results of this study, WLE appears to work with youth in a way that reflects this principle. This is based on the following findings from the case study: (a) young offenders rated various program elements high, including the school program, adventure activities, and the staff, and they felt safe in the program; (b) young offenders believed WLE helped them develop anger management and social skills and provided them an opportunity to practice them in a neutral and safe environment; (c) young offenders showed a significant reduction in Y-OQ scores, especially in the areas of Interpersonal Relations and Social Problems; and (d) recidivism rates were comparable with other studies on young offenders in custody. Despite these findings, care should be taken in interpreting these results because

of previously mentioned limitations. What this study does suggest is that programs like WLE may be appropriate, safe, and effective for similar types of young offenders, but future research and evaluation is needed to form more accurate conclusions.

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Keith C. Russell, PhD, is an associate professor in the School of Kinesiology at the University of Minnesota. His research interests include evaluation of youth development and intentional social and emotional learning programs for adolescents in wilderness and adventure settings.