THE IMPACT OF ADJUDICATED RESIDENTIAL TREATMENT ON RECIDIVISM IN FEMALE YOUTH

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ABSTRACT

This study explores the impact of adjudicated residential addiction treatment on recidivism in female youth. Recidivism was measured both in elapsed time to reoffending and in number of new offences in several offence categories. Findings indicate that female youth admitted to the residential addiction treatment program demonstrated reduced recidivism in several offence categories, compared to youth who were referred, but not admitted, to the program. Unlike previous research, this study did not indicate a relationship between multiproblem youth and reduced engagement and retention or less positive treatment outcomes. As the treatment program operates as an alternative to custody, these findings support that adjudicated treatment may be effective in addressing the issues underlying criminal behaviour in some youth.

Key Words: young offender, substance abuse, recidivism, Youth Criminal Justice Act, female multiproblem youth

DEDICATION

To my parents – my inspiration in all I do.

And in loving memory of my grandmother, Mary McGuire, who always thought I was a smart cookie.

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Thank you to my friends and family for putting up with me while I worked on this project...

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CHAPTER 1: INTRODUCTION

This thesis examines the effect of adjudicated residential treatment on recidivism in female youth. Several variables that, according to other research, influence treatment outcomes, such as engagement, retention, program completion and related criminal justice involvement are also included. In effect, this thesis attempts to identify key characteristics of those female youth adjudicated to attend the treatment program that are hypothesized to affect more positive treatment outcomes. This research will provide new information both on how adjudicated treatment programs can assist female youth and on how best to address program or service gaps in the sector.

The thesis sample consists of female youth who are involved in the youth criminal justice system and have substance use issues. They also may be sentenced to attend the intensive residential treatment program as a condition of a community supervision order. These treatment programs are an alternative for youth custody. The specific program utilized in this thesis is funded through the Ministry for Children and Family Development and serves both adjudicated and non-adjudicated female youth from throughout British Columbia.

In order to understand the current policies toward adjudicated female youths, it is important to undertake a historical examination of how custodial dispositions have been used to address female delinquency and how the

conception of the female young offender has evolved. Most importantly, this historical perspective is integral in recognizing the distinct needs of female youth in conflict with the law. A critical theme is that these needs are more effectively met through integrated treatment efforts rather than incarceration.

Another essential policy theme explored is the relationship between criminality and substance use, more specifically, the correlates of female delinquency and addiction. There is considerable research demonstrating that criminal involvement and substance use are strongly correlated with a history of various forms of abuse, including trauma and neglect in females. These relationships will be examined to determine if similar patterns are identifiable in the thesis sample. Again, the policy objective of these findings and analysis is to assist in the development of effective services which meet the distinctive needs of adjudicated female youth with substance abuse issues.

My interest in focusing my thesis on the impact of adjudicated addictions treatment developed directly because of my work in the program under examination. I have been involved, in various capacities, with the program for the past five years. Although annual program evaluations are conducted, I believed there was a need for a more complete analysis of the program's impact on the female youth clients. My original intent was to determine rates of recidivism and relapse for all the clients. Unfortunately, it was impossible to obtain reliable data on substance use relapse. For example, while operationalizing substance use relapse is difficult in itself, many of the female

youth who leave the program utilize post-treatment resources which are not always identifiable or available in the program files. Given these reliability concerns, the present study was limited to examining recidivism only.

An important advantage of my involvement with the program is that it enabled me to gain access to the sensitive data necessary to conduct the above policy and theoretical objectives. As well, I believe I have an intimate understanding of the organization, which helps to contextualize the program treatment model, components and process. Finally, I have a personal knowledge of the youth involved in the program; therefore, I believe it provides a more nuanced understanding of the aggregate data.

Again, while the original intent of my thesis was to examine the complete impact of the program, measuring impact through recidivism only has several fundamental limitations. Most critically, throughout the treatment process, the clients typically make progress in many areas, including new skills, self-confidence, esteem and awareness. Yet, given that the program is tailored to meet the individual needs of the clients, it was difficult, with the limited research resources, to develop valid measures of the complete range of program impacts. In effect, treatment success is an individualized experience; however, although recidivism data alone does not assess the impact of adjudicated treatment, it does provide an essential measure. Clearly, a major objective of the program is to provide the services necessary to reduce the likelihood that clients' problems are met in a manner which results in them engaging in criminal behaviours and

subsequent involvement with the youth justice system. The ultimate policy concern under the *Youth Criminal Justice Act* (YCJA) is that youth, especially vulnerable groups, such as females, are not sentenced to incarceration even for serious offences when substance abuse issues are involved as well. In other words, recidivism is a critically important policy outcome for the program given the above YCJA sentencing objective. Also, as will be discussed below, the research literature indicates a substantial correlation between substance abuse and serious offending resulting in incarceration; consequently, if the former can be mitigated, it is hypothesized that the latter likelihood is reduced.

1.1 Chapter Overview

Since the program focus is on providing substance use treatment, Chapter 2 will review the related key concept of addiction as well as theories of addiction. This conceptual and theoretical review is central to the review of the main treatment perspectives which are presented. Another major theme in this chapter is a review of the literature concerning the relationship between addiction and criminal behaviour, generally, and specifically, female young offenders.

Chapter 3 involves a discussion of the Youth Criminal Justice Act and British Columbia's youth justice system. This is necessary because it describes how the female young offenders are processed into the treatment program. As well, the YCJA and the BC youth justice system limit the type of interventions available to female young offenders with substance use issues. Again, since recidivism is the single program outcome measure assessed, it is important to

review how charges resulting in subsequent convictions (i.e., recidivism) typically occur.

Chapter 4 returns to the treatment theme by examining the evaluation literature on effective treatment for substance abuse given the YCJA and British Columbia's youth justice system. The program under review in this thesis is also described in detail.

Chapter 5 includes the methodology utilized to assess the following hypotheses: 1) those who complete the intensive residential treatment program demonstrate lower recidivism than those who do not complete the program; and 2) female young offenders with multiple problems have a lower rate of retention and engagement than those with fewer problems. Socio-economic, ethnic, racial and problem profiles of the sample will be described.

Chapter 6 includes the results and discussion. Finally, this chapter will provide recommendations for both future research and treatment strategies for female young offenders with substance abuse needs.

Again, the purpose of this study is to examine whether participation in a community-based program for adjudicated youth reduces recidivism. A longer-term, intensive, residential treatment program for female youth in British Columbia was used for analysis. The program is comprehensive and holistic and uses a variety of treatment components that have been demonstrated to be effective with adjudicated youth.

It was hypothesized that youth who participated in the treatment program would demonstrate less recidivism than those youth who were referred to the program, deemed suitable for admittance, but never attended the program. Also, it was hypothesized that youth who completed the program would demonstrate more positive treatment outcomes (in terms of recidivism) than those who were admitted but did not complete the program. Finally, the impact of numerous intervening variables on treatment completion and recidivism was examined to determine if any factors were likely inhibiting or promoting success in treatment. It is possible that these variables could be identified in order to tailor existing services to best meet the needs of our clients and to identify service gaps that may promote more positive long-term outcomes.

CHAPTER 2: THE CONCEPT OF ADDICTION AND RELATED THEORIES

In discussing addiction or problematic substance use, conceptual definitions are fundamental in empowering or stigmatizing an individual. In discussing various addiction theories and treatment models, it is important, therefore, to review key concepts such as addiction. For the purpose of this study, "addiction", most generally, consists of problematic psychoactive substance use (BC Ministry of Health Services, 2004). Psychoactive substances include alcohol, illicit drugs, solvents, and some over-the-counter or prescribed medications. Problematic substance use can be defined as "potentially harmful substance use behaviours or patterns" (BC Ministry of Health Services, 2004, p. 4). This broad definition is defined partly to encourage health-related services for individuals whose substance use is becoming problematic or harmful, without requiring a clinical diagnosis. "Problematic substance use" also is viewed as a general term involving an individual pattern of use that negatively impacts major life areas (e.g., family and peer relationships, school or vocational functioning, legal system involvement, physical/mental health, etc.).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) includes Substance Use Disorders (SUDs) as a clinical diagnosis (American Psychiatric Association, 2000). Substance Use Disorders are classified into Substance Dependence and Substance Abuse and then further delineated by the

substance involved (e.g., Cannabis Dependence or Amphetamine Abuse). Substance Dependence is defined by a "cluster of cognitive, behavioural, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems" (APA, 2000, p. 192). To receive a clinical diagnosis of dependency, specific criteria must be met relating to tolerance, withdrawal symptoms, increased amount of use, significant time spent obtaining and/or recovering from effects of use, unsuccessful attempts to decrease or control use, negative impact on social, occupational or recreational activity, and persistent use despite physical or psychological impacts (APA, 2000, p. 197; BC Ministry of Health Services, 2004; AllPsych, 2004).

The diagnosis of Substance Abuse does not include criteria related to tolerance, withdrawal or persistent use. Instead, Substance Abuse emphasizes the harmful effects of substance use, including: failure to fulfil role obligations at work, school or at home; recurrent situations with physical risks (e.g., driving while intoxicated); and/or substance-related legal problems. To receive a diagnosis of Substance Abuse, individuals must demonstrate continued use, despite the "significant adverse consequences related to the repeated use of substances" (APA, 2000, p. 198). A diagnosis of Substance Abuse would generally precede a Substance Dependency diagnosis, although, in some cases, individuals have continued substance-related negative impacts for a long period of time without developing Substance Dependence (APA, 2000).

A large proportion of the youth under examination have not undergone a clinical assessment for their substance use. However, the youth in this sample nonetheless meet, at minimum, the criteria for a diagnosis of Substance Abuse. All these youth demonstrate significant substance-related consequences, including: poor school performance (i.e., poor attendance, disciplinary actions); strained family relationships (often resulting in youth running away and being at risk of relative homelessness); involvement in physically hazardous situations (e.g., high-speed car chases and sexual victimization/exploitation); and criminal justice involvement (both committing offences to obtain drugs and committing offences under the influence).

In consulting with my program colleagues, there is a consensus that the vast majority of the youth referred to or admitted to the program would also meet the criteria for Substance Dependence, as most demonstrate requisite symptoms involving tolerance and withdrawal specifically with their drug of choice. As well, the sample youth have significantly reduced their social, educational and recreational involvement and have, instead, transferred their time and energy to obtaining, using and recovering from the effects of substances. In many cases, youth would demonstrate multiple SUDs, likely including dependence on their drug of choice and abuse of various other substances (APA, 2000).

For all intents and purposes, no differentiation is necessary between "problematic use" and Substance Use Disorders (SUDs); the term "problematic use" encompasses any known or suspected SUDs. Although not clinically

diagnosed, the majority of youth examined would meet SUD criteria. Youth adjudicated to residential treatment programs are deemed to have problematic substance use patterns by their referring agent (who conducts an in-depth examination of the youths' social history), and by the judge who sentences the youth to attend a residential attendance program as a condition of their probation order. In addition, youth referred to a residential attendance program must be deemed suitable by a screening committee, which examines factors including criminal history, previous treatment services accessed, age of onset and frequency of use, parental involvement, treatment objectives and discharge plan. At intake, several assessments are conducted to explore the level of use and the youth's substance-related adversities. This multi-step procedure ensures that youth attending the treatment program are demonstrating problematic substance use patterns, while recognizing that what constitutes problematic substance use is individual.

Based on the definition of problematic substance use relevant for this study, the following section will examine conflicting theories on the etiology, progression and maintenance of problematic substance use. The theories of addiction discussed below can be grouped into two distinct perspectives, biomedical and biopsychosocial spiritual, and serve to give rise to various treatment models and components.

2.1 Theories of Addiction

In discussing addiction treatment, it is important to clearly delineate various theories involved in the study of addiction and the models of treatment associated with these theories. Most importantly, these various theories have their own assumptions about problematic use, its etiology and reasons for maintenance.

The following theories are categorized into those which view addiction as individual psychopathology and those which focus on social influences. Following, two key perspectives of addictions, the biomedical and biopsychosocial spiritual perspectives are identified and treatment models based on those perspectives are discussed. The biopsychosocial spiritual perspective attempts to integrate biological and psychological individual characteristics with social factors and spirituality. This integrative theory has become dominant within addiction services in British Columbia and is endorsed by the Provincial Government (e.g., Ministry of Health Services, Ministry of Children and Family Development).

2.1.1 Individual Psychopathology

One group of theories of addiction emphasizes individual characteristics, usually moral or psychopathological. From this perspective, addiction results from a personal character defect (moral theory) or a lack of spiritual influence and involvement (spiritual theory). Addicts are seen as fundamentally distinct from non-addicts because they are considered to be suffering from either the

disease of addiction (disease theory) or another affliction exhibited through addictive behaviour (symptomatic theory).

Within *moral theory*, addiction is seen as a personal choice, resulting from the exercise of free will. Treatment, therefore, involves "holding people accountable" for making that choice (MCFD, 1996). Rational choice theorists argue that addiction is a social construct and that those who use substances make a choice to do so by weighing costs and benefits (West, 2006). To deter use, individuals should be held accountable for their choice to use drugs. Accountability is synonymous with punishment, and those subscribing to moral theory believe that punishment will serve to eliminate the "bad behaviour" (MCFD, 1996). Moral theory, therefore, promotes a criminal justice response to substance use. Adherence to the moral theory of addiction is implicit in American drug policy and is seen in practice in the "War on Drugs", where substance use and dependency result in extreme criminal sanctions.

In *spiritual theory*, drugs are not seen to cause addiction or abuse; instead a spiritual flaw is the cause. In other words, addicted individuals choose to use substances rather than accept responsibility for the problems and suffering inherent in human existence (Doweiko, 1999). "Addiction can be viewed as an outcome of a process through which the individual comes to use chemicals to avoid recognition and acceptance of life's problems" (Doweiko, 1999, p. 252). According to spiritual theory, individuals with addiction issues are powerless and unable to make positive changes without the guidance or influence of a divine

"higher power". The spiritual theory provides the basis for the Alcoholics Anonymous' (since modified to include other substances) 12-Step Model, which will be examined in the following section.

In contrast to spiritual theory, the *disease theory* and *symptomatic theory* are both derived from a medical perspective of addictions. In disease theory, substance misuse is no different from any other disease; some members of the population have a predisposition to develop the disease and typically, this disease progresses and while there is no cure, the disease can be treated in order to maintain basic health. Historically, disease theory was advanced in response to the "moral disorder" of alcoholism (Doweiko, 1999, p. 230). Its original proponent, Jellinek (1952) argued that the disease of alcoholism was characterized by an individual's loss of control over drinking and the progression of other related symptoms. He delineated four stages of alcoholism, with specific symptoms appearing at each stage: first, individuals move through from a "prealcoholic phase", where alcohol is used to release tension, to the "prodromal phase", where the individual is increasingly preoccupied with drinking, develops feelings of guilt and experiences blackouts. Third, the individual moves to the "crucial phase", where they experience withdrawal symptoms, self-pity, lowered self-esteem and the loss of control over their substance use. This phase is similar to dependency according to the DSM-IV Substance Use Disorder criteria. The fourth and final stage in Jellinek's disease model is the "chronic phase", where the individual develops an obsession with using alcohol, develops tremors, and may seek substitutes if alcohol is not available. He (1952, 1960) asserted

that, if untreated, alcoholism would progress and eventually cause death. Although it originally was constructed to explain alcoholism, disease theory has expanded to account for a variety of substances. In effect, the disease of addiction requires medical treatment. Yet, when the ultimate goal of abstinence is achieved, the addict is always at risk for relapse. This is demonstrated in the oft-repeated axiom of 12-Step meeting attendees - "once an addict, always an addict".

Controversially, Doweiko (1999) claims that proponents of the disease theory have accepted the theoretical model "as an established fact" (p. 245). However, although originally this theory was formulated over 50 years ago, treatment models based on disease theory have "remained essentially static for the past two generations" (Doweiko, 1999, p. 245). Its critics assert that, while disease theory helped to promote a more compassionate response to individuals who are addicted, this theory requires reformulation since its widely utilized treatment practices must be subject to evidence-based best practice evaluations to assess the validity of both the theory and its predicted treatment impacts.

Related to general disease theory is symptomatic theory, which maintains that substance use is the result of another mental illness. Treatment, therefore, must focus on treating the underlying disease or disorder. Substantial research supports the link between Substance Use Disorders and other psychiatric disorders including psychosis, adjustment disorders (Cancrini, 1994), depression, anxiety, and conduct disorder (or antisocial personality disorder) (Beitchman et

al., 2001; Slesnick & Prestopnik, 2005). It is estimated that between 40% and 90% of youth treated for SUDs have conduct problems, 20% to 30% meet the criteria for depression, and between 7% and 18% have an anxiety disorder (Slesnick & Prestopnik, 2005). Amongst homeless and runaway youth, it was found that 60% met the criteria for dual diagnosis, i.e., at least one mental health diagnosis and the presence of a SUD, with 56% having demonstrated multiple SUDs (Slesnick & Prestopnik, 2005, p. 185-186).

Cancrini (1994) created a typology of four categories of drug abusers, based upon their underlying psychiatric issues; adjustment disorders, neurotic disorders, psychosis and sociopathic personality. Cancrini (1994) theorized that: addicts with adjustment disorders used substances because of childhood trauma; those with neurotic disorders tended to use to reduce anxiety; those with psychosis used to create a sense of freedom; and those with a sociopathic personality expressed internal conflict through externalized acting-out while under the influence. Interestingly, his research demonstrates that females are more prominent in the adjustment disorder group (traumatic addiction) and in the sociopathic group. The traumatic addiction group is likely to be younger, while both the traumatic and sociopathic groups are more likely unemployed and come from a single-parent family resulting from separation for the sociopathic group and death for the traumatic group; 49% of individuals with traumatic addiction had one or both parents die. In addition, the sociopathic group had more suicide attempts and more previous convictions (Cancrini, 1994).

Even though Substance Use Disorders (SUDs) are often comorbid with other psychiatric disorders, no research demonstrates that psychiatric disorders cause problematic substance use. From a treatment perspective, therefore, it is important to recognize the distinctive needs of patients with dual diagnosis. Like the disease theory, symptomatic theory requires treatment which is dependent on professionals in diagnosing and treating patients. Consequently, theories based on the medical perspective are criticized for their over reliance on professional treatment primarily because this disempowers the addicts and reduces them to helpless patients or permanent victims (MCFD, 1996).

2.1.2 Social Influence on Addiction

The *social theory* and *learning theory* focus on the social causes of addiction. S*ocial theory* is based on the assertion that addiction results from social injustice, including systemic racism, unemployment, poverty, violence and family dysfunction (MCFD, 1996). These forms of social injustice cause stress which, in turn, result in substance use to cope and adapt. Accordingly, treatment focuses on providing the wide range of skills necessary to participate in the wider social context of family, neighbourhood, school and the workplace. Also, efforts are required for fundamental community-based social change and needed to provide support systems for those most disadvantaged. In effect, interventions are needed not only at the individual level but also at the community level.

The *learning theory* focuses on the proposition that substance misuse is a learned behaviour which is maintained because of its reinforcing properties.

Although the process of acquisition is complex, substance use may be maintained because of its perceived benefits to the user, such as the increased social involvement with others who are actively using, increased ability to function in aversive environments, and an increased ability to cope with unpleasant psychological states (MCFD, 1996). Learning theorists argue that problematic drug use patterns are acquired through classical and operant conditioning and social learning (Davis, 1996; Peele & Alexander, 1985; Frederick, 1980; West, 2006).

Classical conditioning occurs when an individual pairs specific drug-related effects with environmental stimuli; certain environmental cues elicit a conditioned response (West, 2006). For example, an individual might learn to associate drug paraphernalia (e.g., tin foil, cotton swabs) or specific locations with the effects of substances such that the presence of these items elicits a physiological response similar to the effect of using the substance. Individuals may also learn to associate feelings of withdrawal with certain stimuli, such that the presence of those stimuli causes a conditioned response similar to withdrawal, creates cravings and may trigger the individual to use (West, 2006).

Operant, or instrumental, conditioning involves increasing the frequency of certain behaviours through reinforcement. The use of substances provides powerful positive and negative reinforcements, which increase the chance of further substance use. Drugs can act as a reward, or reinforcer, in the positive feelings they provide the user. Under the influence, the user may feel euphoric,

more social, attractive and self-confident. Negative reinforcement involves reducing or eliminating painful or aversive stimuli. Substance use can be a negative reinforcer in that it reduces feelings of anxiety, depression or other negative emotions. Similarly, substance use can eliminate withdrawal symptoms (which can be unpleasant and painful), so the user learns to use to escape feelings of withdrawal (West, 2006). One theory is that drug use is acquired through classical conditioning, and maintained through operant principles (Davis, 1996). Social learning theorists argue that an individual's cognitive processes, including expectations and interpretations, influence conditioning. The learning theory is further explored below in the discussion of cognitive-behavioural treatment options where treatment focuses on behaviour modification, the learning of new behaviours, and more productive coping skills.

While the social theory and learning theory both emphasize the importance of social and interpersonal factors in addiction, these theories do not adequately explain how individual characteristics are expressed within the social environment. In other words, there are a wide variety of interactions between individual level characteristics, such as psychological disorders, and different socio-economic contexts, such as families, neighborhoods, schools and the workplace, that must be understood to develop effective treatment interventions.

2.2 Addiction Perspectives and Treatment Models

Based on the above theories, two opposing perspectives on addiction treatment have been advanced; the biomedical and the biopsychosocial spiritual

perspectives. These perspectives make various suppositions about the etiology of addiction and examine why maladaptive behaviour is maintained. These perspectives are then used to substantiate different interventions and methods of treatment.

2.2.1 Biomedical Perspective

Drawing from disease theory, the biomedical model addresses addiction from a medical perspective. Addicts are viewed as biologically different from non-addicts; the former have a biological or genetic predisposition to develop problematic substance use. Most importantly, the existence of a genetic influence in the development of problematic substance use is evident. Adoption and twin studies indicate that this genetic predisposition is mediated by environmental factors (Wallen, 1993). Agrawal and Lynskey (2006) recently reviewed the research on the genetic epidemiology of cannabis use and the relationship between liability to cannabis abuse on the one hand and dependence and other drug involvement on the other. They assert that there is a genetic basis to each stage of cannabis involvement (i.e., use, abuse and dependence), and that common genetic and environmental factors influence cannabis and other drug involvement. The studies examined determined the genetic influence ranged from 17% to 78% (Argrawal & Lynskey, 2006). Doweiko (1999) cited work by the National Institute on Drug Abuse that estimates that 30% of addiction is due to genetic predisposition, while 70% is contingent upon environmental factors (p. 245).

Research has also focused on identifying characteristics of an "addictive personality". A biomedical perspective was utilized to identify what types of people are most prone to develop an addiction. The most distinctive pattern of characteristics of interest included "independence, aggressiveness, rebelliousness, rejection of societal values, antisocial behaviour, impulsivity, psychopathology, low self-concept and hyperactivity" (Otter & Martin, 1996, p. 95). Other studies found similar characteristics such as anxiety, aggression, depression, anergia and low self-esteem (Doweiko, 1999). Despite these studies demonstrating that certain personality traits are correlated with problematic substance use, there are no consistent findings that definitively establish the same pattern of traits. Equally critical, there is an intense debate over whether the personality traits precede, or result from, substance use. In effect, is substance use a form of self-medication for those suffering from anxiety or depression, or does substance use cause increased anxiety or depression?

In addition to supporting genetic predisposition, the biomedical perspective maintains that like any other primary disease, addiction intensifies without treatment. As well, addiction has a biological basis and is beyond individual control; addiction can be treated but will continue to exist in the user. Finally, as mentioned above, professionals are essential in diagnosing and treating addiction. The biomedical perspective underlies the Minnesota Model as the best form of treatment.

The Minnesota Model

Addiction as a disease is central to the Minnesota Model; addiction is a unitary condition with the unitary treatment goal of abstinence. Another assumption is individuals biologically susceptible to addiction lose control over their ability to manage their substance use, and thus, cannot use in moderation. Treatment involves individual and group therapy, adherence to the 12-Step philosophy, psychoeducational sessions, family counselling, meeting attendance and 12-Step work (Muck et al., 2001). The 12-Step work is broken down into key stages: steps 1-3 focus on honesty and deciding to stop using drugs or alcohol, steps 4-9 focus on developing and implementing an action plan for change and correcting past wrongs, steps 10-12 encourage ongoing recovery work (Muck et al., 2001). Finally, attending further 12-Step meetings is encouraged in order to support long-term abstinence.

Historically, the development of the Minnesota Model has been seen as a progressive and compassionate advance from the previous theories of addiction (i.e., moral theory) which, as stated, focused on moral ineptitude and criminalizing addictive behaviour. The Minnesota Model promoted the use of treatment facilities and transferred responsibility of those with addiction issues from morality and social control agencies to medical and public health authorities. This model also encouraged the public to adopt a non-discriminatory view of addiction while similarly encouraging addicted individuals to access treatment services without guilt or self-blaming. In effect, the Minnesota Model, although not fully supported by empirical research, is seen by its proponents as a great

improvement over the use of "moral censure and criminal punishment" for individuals with addiction issues (White, 2001).

The 12-Step Model

Although often included as a model based on a biomedical perspective, the 12-Step model did not originally utilize a disease concept of addiction. Subsequently, the 12-Step model has become associated with the disease concept, although it was originally more congruent with the spiritual theory of addiction. Nonetheless, the 12-Step model differs little from the Minnesota Model in terms of treatment modalities. This is evident in comparing the 12-Step and Minnesota Models.

The Alcoholics Anonymous (AA) or 12-Step treatment model is often incorrectly viewed as a biomedical model (MCFD, 1996; Miller & Kurtz, 1994). Although the Minnesota Model (which arose from a biomedical perspective based on the disease concept), has incorporated the 12-Step treatment model into its treatment process, the original 12-Step model can be differentiated by its belief that addiction can be caused by the interaction of multiple factors. According to Alcoholics Anonymous (2001), alcoholism is "an illness which only a spiritual experience will conquer" (p. 44). Prima facie, this appears congruent with the disease concept, however, it is more accurately a model derived from the spiritual theory of addiction. The co-founders of AA recognized that addiction can originate from problems in physical, mental and spiritual realms. Since they believed there were potentially different causes in the development of addiction,

the 12-Step model allows for individual pathways to addiction and recognizes that maladaptive drug/alcohol use could be maintained by different forces. Still, the 12-Step model focuses on stopping problematic behaviour by increasing conscious spiritual contact to encourage positive life changes. In effect, while AA/NA literature makes numerous references to the "disease" of addiction, this treatment model differs fundamentally from a biomedical model.

Unlike the traditional biomedical perspective, 12-Step treatment does not rely on the involvement of professionals in the treatment process; it instead emphasizes the "therapeutic value of one addict helping another" (Narcotics Anonymous, 1976). Rather than encouraging the addict to rely on helping professionals to manage their disease, 12-Step treatment aggressively promotes turning their "power" over to a higher power in order to achieve a "spiritual awakening" (Narcotics Anonymous, 1976).

Both the Minnesota Model and the 12-Step model focus on abstinence and see addiction as an accelerating or progressive condition. Without a spiritual awakening, 12-Step proponents believe addiction leads to "jail, institutions and death" (Narcotics Anonymous, 1976). Although the 12-Step model is spiritually based, it has become assimilated with the disease concept of the Minnesota Model to such an extent that they are often seen as synonymous. The treatment modalities (i.e., adhering to 12-Step philosophy and working the 12-Steps) and treatment objectives (i.e., abstinence) are largely similar. Given this

convergence, future references regarding treatment models will refer to the Minnesota/12-Step Model.

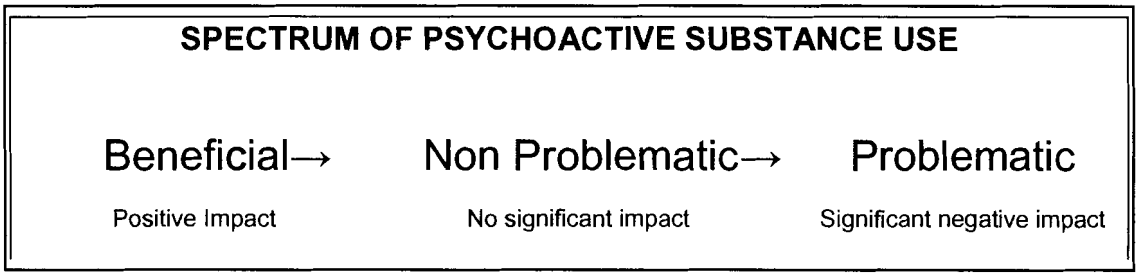
2.2.2 Biopsychosocial Spiritual Perspective

The biopsychosocial spiritual perspective (BPSS) is an alternative perspective to treating addiction. The government of British Columbia has adopted this perspective since it recognizes substance misuse as a result of the interaction between biological, psychological, social and spiritual factors. In other words, addiction policies require a holistic approach to problematic substance use.

The BPSS perspective is further based on the assertions that substance misuse involves a continuum of severity and that misuse does not necessarily progress to a fatal stage. In addition, because of the complex interaction between multiple variables, individuals have their own distinctive experience of addiction, and, therefore, there is no single superior treatment for all misuse (MCFD, 1996). Treatment must be individualized and based on accurate and comprehensive assessment of problem areas before the appropriate interventions can be provided. Most importantly, recovery may or may not require abstinence, depending largely upon the severity of use. That is, this perspective includes a spectrum of harm reduction treatment goals, including abstinence.

In terms of causality, the BPSS perspective does not scientifically determine how addiction is caused. Instead, this perspective advances several hypotheses related to the development of problematic substance use (MCFD, 1996). The first hypothesis is: Substance use occurs along a continuum, ranging from beneficial to problematic; and, problematic use will vary in severity. The reasoning for this hypothesis is that, given that most people use psychoactive substances at least occasionally, substance use in itself is not inherently addictive. Indisputably, people have used plants and plant extracts to achieve altered consciousness throughout history. It is the enormously complex interaction among the substance, the environment and the method, amount and frequency of use that determines the substance's addictive effects (Ministry of Health Services, 2004). In effect, most often, psychoactive substances have been used in beneficial or non-problematic ways, yet these same substances can also cause significant health and social problems for some users (see Figure 2-1).

Figure 2.1 - Continuum of Substance Use



(Adapted from BC Ministry of Health Services, 2004)

Given that substances are not automatically beneficial or problematic, substances, historically, have been dichotomized in several ways to reflect the positive and negative ends of the spectrum, e.g., good/bad, soft/hard, or legal/illegal.

In terms of explaining the impact of substance use, numerous variables must be considered before appropriate treatment interventions can be identified. For example, an individual who smokes marijuana is typically at reduced risk or suffers less severe negative impacts than an individual who injects heroin. From the BPSS perspective, suitable treatment interventions should be available for all levels of involvement, including minimum use of "soft drugs" in order to lessen the likelihood of potential harm which could occur with subsequent use. Treatment interventions, therefore, have the goal of reducing the user's potential risk.

Another BPSS hypothesis is: problematic use does not develop in a fixed pattern. Depending on individual factors and substance use risk factors, problematic use does not invariably progress to a fatal stage. Individual use may begin at any point of the continuum (see Figure 2.1) and either remain stable or move to another point. Movement along the continuum may be gradual or rapid. One individual may be at different points of the continuum for different substances. For example, an individual may demonstrate problematic alcohol use but non-problematic marijuana use. Progression through to a problematic level of substance use is most often related to the type of substance used.

Faster progression has been noted for opiates, followed by cocaine, cannabis, tobacco and alcohol. In addition, females tend to have shorter transition times than males; although gender differences are small, this demonstrates females may have a greater risk of progressing to problematic use and/or dependence (Ridenour et al., 2006). Not uncommonly, it is possible that "even without therapy, some addicts tend to recover spontaneously and seek a less involved relationship with drugs" (Cancrini, 1994, p. 599). Unlike the biomedical perspective, which sees addiction as inevitably progressing to a fatal stage without treatment, the biopsychosocial spiritual perspective argues that the progression (or stability) of problematic use is individual.

This individual variation is central to the BPSS hypotheses that: the experience of addiction differs for each individual, and the population of substance misusers is heterogeneous. These hypotheses contradict the myth about the stereotypical addict; i.e., predictable descent to fatality without intervention. While some individuals or groups are more vulnerable to develop problematic substance use, individuals with problematic substance use come from virtually every socio-economic level and ethnicity/race (Ministry of Health Services, 2004).

As mentioned above, a central treatment hypothesis is that: successful treatment is dependent upon accurate and comprehensive assessment, and matching individuals to appropriate treatment. According to the BPSS perspective, the continuum of substance use requires the use of a continuum of

treatment services. In effect, a variety of prevention and treatment options need to be available to best fit the individual needs of the person requiring assistance. To ensure this fit, comprehensive assessment and least intrusive services are seen as necessary.

As well, treatment may have a hierarchy of harm reduction outcomes, including abstinence. Abstinence may not be a realistic or desirable outcome for everyone demonstrating problematic substance use. As treatment objectives are individualized, the definition of treatment "success" can take on multiple meanings. Again, this differs significantly from a biomedical perspective, which argues that addicted individuals are unable to control or modify their use in order to reduce harm.

As seen in the above hypotheses, the biopsychosocial spiritual perspective supports the use of individualized interventions and treatment modalities. Most treatment regimes based on the BPSS perspective combine a number of methods to maximize the efficacy of treatment for a target population.

Treatment models derived from a biopsychosocial spiritual perspective often use a combination of cognitive-behavioural therapy, family-based counselling, and individual and group counselling. Based on assessment and matching, the treatment components that best fit the needs and individual goals of the client are utilized.

Assessment and Matching Treatment

Assessment will focus on a youth's motivation or willingness to examine their substance use and criminal involvement and make active changes in their behaviour. Accurate assessment is vital in matching appropriate interventions; if an intervention is not successful, it may be not that the intervention is flawed but that it is being incorrectly matched to clients.

The Transtheoretical Model of Change explains the process of intentional change and has been adapted to examine changing addictive behaviours (Prochaska, Diclemente and Norcross, 1992). This model appears to be a useful construct in assessing youths' willingness to change and it provides suitable interventions for each stage (Callaghan et al., 2005). The model outlines five stages in intentional change (all taken from Prochaska & Diclemente, 1983; Prochaska, Diclemente & Norcross, 1992): First, during the *precontemplative* stage there is the inability to recognize behaviour as problematic. At this stage, there is no intention of changing behaviour. Individuals are likely unaware of, or ignore, the negative consequences of continuing a particular behaviour. When an adolescent who is in the *precontemplative* stage is involved in addiction services, it is generally because of pressure from others (e.g., parents, probation, school, etc.). As well, in this stage the focus is on helping the client to see how the behaviour negatively impacts their social and physical environment. Therefore, interventions specifically focus on consciousness-raising (increasing awareness of the negative consequences of behaviour) and on examining how behaviour impacts others in the social environment.

In the *contemplative* stage, there is an initial awareness that a problem exists, and the need to overcome problems. However, there is rarely a commitment to change, often because of the lack of skills and/or support required to make that commitment. The *contemplative* stage, therefore, can involve an extended period which is referred to as "chronic contemplation" or "behaviour procrastination". Interventions in the *contemplative* stage focus on helping the individual move through their ambivalence about the need for behaviour change. This can occur through the expression of experiences and emotions (i.e., dramatic relief) and by recognizing how current behaviour patterns are incongruent with their values, beliefs and objectives (i.e., self re-evaluation)

During the *preparation* stage, individuals decide to take action that will change their behaviour. Generally, they have already taken some significant action to facilitate change within the previous year (e.g., accessing detox services). Interventions in the *preparation* stage focus on creating a workable harm reduction and/or withdrawal management plan, while continuing to address ambivalence around making changes. Helping relationships are of paramount importance in implementing positive changes; individuals need to trust and accept the support of others while attempting to change the problem behaviour.

In the *action* stage, the modification of behaviour and patterns of thinking occurs, along with changes in environment, all designed to overcome substance abuse. This, therefore, is the busiest stage and usually requires a considerable commitment of time, determination and effort. These changes tend to be the

most visible and receive the greatest recognition from others, yet, too often, even professionals mistakenly equate change with action. As a consequence, they may overlook the important efforts that lead to and/or maintain the changes that occur within action. Most importantly, therefore, interventions in the *action* stage focus on making long-term shifts to a new lifestyle through awareness and learning to control situations and triggers for problem behaviour. Individuals learn how to substitute stimuli that support alternative behaviour, and work on developing a peer group that is supportive of their new behaviour. Throughout this stage, it is important to promote the use of internal and external rewards for all the effort expended in making positive changes. In effect, positive choices are affirmed, and progress is rewarded and celebrated. Finally, helping relationships continue to offer care and support and provide referrals to appropriate resources.

At the *maintenance* stage, individuals work to prevent a relapse while continuing their gains from the previous stage. Interventions focus on building upon the action stage and relapse prevention planning. Individuals continue to develop alternate support systems and continue to affirm their accomplishments. Emphasis is placed on avoiding overconfidence and maintaining awareness of triggers for relapse.

Most people do not maintain all their gains the first time they try to change a problem behaviour. *Relapse* can occur at any stage of the Stages of Change model and involves returning to the problem behaviour after a period of non-problematic behaviour. Distinctions are made between short and long term

returns to the problem behaviour. A *relapse* can be used as an opportunity to reinforce the targeted change; the individual uses the *relapse* stage as a learning experience and is able to quickly recommit to their new behaviour. Again, this stage provides the opportunity to examine negative perceptions, triggers, high-risk people and places and to plan how risk can be reduced in the future.

Each behaviour that a youth desires to change can be examined independently using the Transtheoretical Model of Change. For example, the youth may be in different stages with respect to their use of various substances; the youth may be in the action stage regarding their methamphetamine use but precontemplative about their marijuana use. Similarly, the youth may be in different stages with respect to their use and their criminal behaviour; perhaps the youth is prepared to change their criminal behaviour but precontemplative about their substance use. Thus, willingness to change each problem behaviour is assessed and interventions then are specialized for each behaviour or issue under examination.

The Stages of Change Model allows for examination of an individual's motivation to make positive changes in their behaviour. Based on the individual's willingness and motivation, appropriate approaches and interventions can be used in treatment. The treatment components of the approaches discussed below can be individualized to the needs of youth at each stage of the model. Treatment based on the biopsychosocial spiritual perspective may use a combination of cognitive-behavioural therapy, family-based counselling, and

individual and group counselling. As the BPSS perspective recognizes the individual experience of addiction, each client will require services that meet their unique needs.

Cognitive-Behavioural Therapy

Cognitive-behavioural approaches examine the cognitive processes, beliefs and social situations associated with drug use. Problematic use is seen as a learned behaviour which is maintained because of classical or operant conditioning learning principals (Muck et al., 2001). In effect, associations between drug use and certain stimuli or environments are created so that it becomes difficult to be in certain environments without being triggered. Also, drug use may be a powerful reinforcement in its ability to reduce stress, regulate negative affect or enhance social interaction (Waldron & Kaminer, 2004).

Behaviour modification concentrates on learning new skill sets to facilitate the ability to utilize prosocial coping techniques (Muck et al., 2001). Some common skill building exercises include communication, relationship building, conflict resolution, anger management, stress management, building support networks, and learning productive social and recreational activities. A CBT exercise may involve identifying the high-risk places or triggering thought processes involved in relapse, and attempting to replace negative cognitive processes with positive self-talk and adaptive coping techniques. Stimuli control and the involvement of alternative activities are similarly emphasized as effective interventions in the Stages of Change Model. Treatment sessions also use

modeling, behaviour rehearsal and homework assignments (Waldron & Kaminer, 2004).

Family-Based Counselling

Most treatment programs using a biopsychosocial spiritual perspective attempt to maximize the involvement of family members in the treatment process of youth, wherever possible. In some cases, counselling focuses on improving communication, rebuilding relationships, or discussing relapse prevention with the purpose of reintegrating the youth into their family home. Some programs use a family systems approach; examining how youth function in relation to the functioning of other family subsystems (e.g., parents, children, extended family) (Muck et al., 2001). Family therapy techniques include observing the interaction between family members, clarifying roles or boundaries, reframing and relabeling problem behaviour and encouraging direct communication in developing stronger relationships (Muck et al., 2001).

Individual and/or Group Counselling

Individual and group counselling sessions are used in most treatment models and are not exclusive to the biopsychosocial spiritual perspective. Treatment programs based on the biomedical model (e.g., the Minnesota Model) also use both individual and group counselling. Individual and group counselling in the Minnesota Model may focus on 12-Step philosophy, working the steps and relating past experiences to the teachings of AA/NA. In contrast, individual and group counselling sessions, from a BPSS perspective, attempt to accommodate

individual treatment needs and focus on the Transtheoretical Model of Change (Prochaska & Diclemente, 1983). Both individual and group sessions would be tailored to meet the needs of the youth involved, recognizing where the youth are in the Stages of Change and providing appropriate interventions to encourage movement through the Stages. Depending upon intensity of involvement with problematic use, sessions may be less frequent and on an outpatient basis or may be more frequent in a residential setting.

Individual sessions focus on building a professional rapport with the counsellor, completing a comprehensive assessment and determining a treatment plan based on individual motivation and willingness to change. Individual sessions may use a motivational interviewing technique (see O'Leary Tevyaw & Monti, 2004) or a strengths-based perspective to encourage youth and increase their willingness to move through the Stages of Change. Group sessions are process-based and focus on providing a safe and comfortable therapeutic environment for peer-based discussion facilitated by the counsellor. Both individual and group sessions allow youth to gain insight into the causes and consequences of their behaviour and increase their willingness to progress and make changes, with respect to substance use and criminal activity.

The program examined in this thesis utilizes a biopsychosocial spiritual perspective, emphasizing a collaboration of the treatment components discussed above. The program will be examined in greater detail later in this discussion. First, the relationship between criminal involvement and addiction is examined.

Special attention is paid to the concept of the female offender and the distinct needs of female adjudicated youth demonstrating problematic substance use.

2.3 Criminal Involvement and Addiction

As the female youth under examination in this thesis are youth justice clients with substance misuse issues, the relationship between these problematic behaviours is first examined. Substance use and criminal behaviour are strongly correlated. The co-occurrence of substance use and criminal behaviour is related to poor social outcomes and an increased chance of recidivism (National Centre for Addiction and Substance Abuse, 2004). Research relating to age of onset for substance use and criminal behaviour will also be examined as early onset tends to be predictive of more chronic involvement and poor outcomes. Of particular relevance to the present study is research demonstrating that gender differences exist with respect to histories of victimization and later criminal involvement and substance use. Females in conflict with the law are more likely to report a history of sexual and/or physical abuse than their male counterparts (Kang et al., 1999; Siegel & Williams, 2003; McCabe et al., 2002). The research on multiple problem behaviours will be weighed in discussion of whether substance use and criminal behaviour have a reinforcing relationship or share common causal factors.

2.3.1 Prevalence of Substance Use Amongst Youth Justice Clients

There is a strong relationship between criminal involvement and substance use for youth. In the United States, it is reported that 78.4% of youth

in juvenile justice systems are "under the influence of alcohol or drugs while committing their crime, test positive for drugs, are arrested for committing an alcohol or drug offence, admit having substance abuse and addiction problems, or share some combination of these characteristics" (National Centre for Addiction and Substance Abuse, 2004, p. 8). Substance use is, therefore, related to the vast majority of crime committed by youth in the US.

When compared to youth in the community, young offenders exhibit a higher prevalence of substance use. A British Columbia study compared differences in substance use between youth in custody and community populations (i.e., students from school environments). The McCreary Society (2005) has found that a far greater percentage of the respondents in custody have used various substances than their school counterparts. For example, 80% of youth in custody had used cocaine, compared to only 5% in school. Similarly, 63% of youth in custody had used amphetamines, while only 4% of the school youth had used amphetamines. The following chart provides a comparison of the other drugs used by the youth in custody and youth in school:

Table 2.1 - Percentage of Youth Drug Use (in custody vs. school setting)

	Custody	School
Cocaine	80%	5%
Amphetamines	63%	4%
Hallucinogens	68%	7%
Prescription drugs without doctor consent	50%	9%
Heroin	20%	1%

(Adapted from McCreary Society, 2005)

The British Columbia study above did not include enough female participants to make any distinctions based on gender; however, a high percentage of youth in custody reported using a variety of substances. In a study of 67 incarcerated female youth in British Columbia, 55% used crack, 49% used heroin and 65.7% used cocaine (Corrado et al., 2000). Again, these numbers are significantly higher than those reported by McCreary Society (2005) for youth in school.

According to US statistics, up to 62% of youth in the juvenile justice system meet the criteria for a Substance Use Disorder (SUD) diagnosis (Aarons et al., 2001). Other research supports a prevalence rate of approximately 50% of detained youth having one or more SUDs (Teplin et al., 2002; McClelland et al., 2004). Among detained youth meeting SUD criteria, multiple SUDs are the rule (McClelland et al., 2004), meaning the majority of these youth are polydrug users

and may be dependent on more than one substance. Youth who have multiple SUDs "have greater treatment needs, are more recalcitrant to treatment, have higher dropout rates and are more likely to relapse" (McClelland et al., 2004, p. 1216). Youth "15 to 24 years old have a greater risk for multiple disorders than all other age groups" (Beitchman et al., 2001, p. 422). In addition, those youth with co-occuring substance use and delinquency are found to be at higher risk for recidivating and for additional arrests (National Centre for Addiction and Substance Abuse, 2004).

Substance use and criminal behaviour are integrally linked. Youth may begin experimenting with substances and develop a new peer group that is more criminally involved. Under the influence, the youth may participate in activities they would not have been involved with otherwise. Youth may engage in criminal activity in order to obtain drugs. Once involved in the criminal justice system, the youth will meet other youth with a similar interest in substance use and delinquency. These relationships may serve to reinforce their involvement in these behaviours. Once addicted, the youth will engage in criminal activities to ensure they can obtain their next fix. Many youth continue to use to self-medicate and avoid feelings of shame related to their criminal activities. These problem behaviours produce a tangled web from which it is difficult for youth to escape.

2.3.2 Committing Criminal Activities While Under the Influence

Drug and alcohol use impact the involvement of youth in criminal activities. Youth who commit offences while using drugs or alcohol are found to be more serious offenders, be more impulsive, be involved with criminal peers and use drugs more heavily. Similarly, youth under the influence are more likely to commit personal, rather than property offences; engage in aggressive behaviours correlated more strongly to alcohol, rather than marijuana, use; commit offences with their peers; and are more likely to be arrested (White et al., 2002). In effect, such youth are more likely to commit offences while intoxicated.

Youth in conflict with the law with problematic substance use have distinct needs and are more difficult to engage and treat than other youth. In particular, the needs of female young offenders are increasingly difficult to address, primarily because their social histories indicate high levels of neglect, trauma and abuse. In other words, young females in conflict with the law are more likely to have experienced histories of sexual and/or physical abuse and neglect, than their male counterparts (Kang et al, 1999; Siegel & Williams, 2003; McCabe et al., 2002).

2.3.3 Victimization and Female Offending

Despite gender differences, the impacts of childhood abuse in later life are often severe and comprehensive. In particular, sexual abuse is correlated with poor school performance, suicidal ideation, disordered eating patterns, sexual

risk taking, substance use and delinquent behaviour (Chandy et al., 1996; Goodkind et al, 2006). As well, a history of abuse is related to: earlier age of onset of drug use and more frequent use with a wider variety of drugs (Perez, 2000); and, major mental health problems including depression, anxiety, self-mutilation and suicidal behaviour and post-traumatic stress disorder (Goodkind et al., 2006; Corneau & Lanctot, 2004; Cauffman et al., 1998). Corneau and Lanctot (2004) also assert that females tend to have more mental health problems, particularly internalizing disorders including depression and suicidal behaviour. In addition, delinquent females are more likely to develop internalizing disorders later in life. In contrast, delinquent males are more likely to develop externalizing disorders; 35% of female youth with conduct disorders developed an internalizing disorder (mostly mood disorders) while 35% of the males with conduct disorder developed an externalizing disorder (i.e., antisocial personality disorder) (Quinton et al., 1990).

Not surprisingly, parents with substance abuse issues are more likely to raise their children in dysfunctional environments, where there is an increased risk of physical and sexual abuse (Cavaiola & Schiff, 1989). As stated above, these types of abuse are linked to youth criminality and substance use. In a study by Chamberlain and Reid (1994), the impact of reported abuse on recidivism post-treatment was examined. Their research focused on the impact of abuse on female and male youth in treatment foster care. The adjudicated youth in this study participated in a foster treatment program as an alternative to custody. The female youth were more likely to have: run away; been sexually

abused (49%); experienced more out of home placements; and attempted suicide than the males in the study. However, males (51%) were more likely to have been physically abused than females (34%). In terms of criminal involvement, the females had a later age of first arrest, fewer arrests, and fewer felony arrests than their male counterparts. Although the female participants had complex needs and multiple problem behaviours, they were not as severely entrenched in criminal behaviour. Interestingly, while there was no difference between the abused and non-abused groups in terms of offending behaviour prior to treatment, the abused group had both significantly more offences post-treatment and more status offences than the non-abused group.

As stated above, since female delinquency is correlated with both substance use and with a history of abuse, it is important to examine the nature of this victimization. In this thesis, information from referral and/or intake information is used to determine if the participant had a history of sexual abuse, physical abuse and/or neglect. In addition, to help isolate abuse from family dysfunction, several variables are examined related to family functioning and connectedness (e.g., data on parenting style, substance use within family, physical fights between parents/youth, etc.).

2.3.4 Age of Onset of Drug Use and Criminal Involvement

The McCreary Society study (2005) revealed that youth in custody had an earlier age of onset of substance use than youth in school settings; 74% of youth in custody reported first trying marijuana by the age of 12, while only 7% of the

youth in school had tried marijuana by this age. Similarly, 68% of youth in custody reported first trying alcohol by the age of 12 while 22% of the school youth reported similarly. As well, youth in custody tried a wider variety of substances at an earlier age than their counterparts in the community.

Earlier age of onset of substance use has been associated with more severe "substance use disorders, criminal activity and other behavioural and psychological problems" (Gordon et al., 2004, p. 41). More specifically, criminally involved youth with problematic use were more likely to have more severe substance use and earlier age of onset of use than non-criminal youth who used substances (Tubman et al., 2004). The former also had higher rates of offending, including violent offences, and had more stable criminal involvement than criminally involved youth who did not use substances (Tubman et al., 2004). Equally important, this early criminal involvement is strongly associated with recidivism, chronic offending and with the increased likelihood of the deviant lifestyle continuing into adulthood. In effect, the earlier the multiple problem behaviours (i.e., substance use and criminality) are exhibited, the more severe and stable the behaviours. Most importantly, each problem behaviour appeared to reinforce and accelerate the development of other problem behaviours (Tubman et al., 2004). Early onset of criminal behaviour has also been correlated with future violent offending (Gordon et al., 2004).

Tubman et al (2004) identified a developmental process whereby antisocial behaviour precedes the development of problematic substance use,

although criminal involvement may not occur immediately. In other words, early behavioural issues can lead to other problems (e.g., family conflict, lack of connection with peers, poor school performance, lowered self-esteem, etc.) which result in experimenting with psychoactive substances as a coping strategy. In turn, problematic use patterns can develop resulting in youth becoming involved with the criminal justice system. Finally, early and persistent involvement in the criminal justice system expose youth to like-minded peers who use substances and engage in criminal activity, thus reinforcing both substance use and offending behaviour.

Gordon et al. (2004) also identified specific factors correlated with early onset of substance use: family deviance; poor school performance; bullying people; being cruel; aggressive behaviour; risky sexual behaviour (i.e., frequency, multiple partners, sex without protection); crime severity and arrests; and prior treatment attempts. Boys are also more likely to indicate earlier onset of use. However, as stated above, a history of victimization (physical or sexual abuse) is more common among female youth in conflict with the law. Also, a past history of abuse generally is correlated with an earlier onset of both drug and alcohol use (Cavaiola & Schiff, 1989; Perez, 2000).

Since the onset of both substance use and criminal behaviour are important indicators of risk for future use and continued offending, data on both variables are included in analysis this thesis. In addition, historical criminal involvement in various types of offending behaviour (e.g., administrative,

property, personal, drug offences) will be analyzed to determine if type of offence can be of value in predicting future offending.

2.3.5 Criminal Behaviour and Substance use: Mutually Reinforcing or Common Etiology?

The relationship between criminal involvement and substance use is strong but not well understood. Although criminal behaviour and substance use often co-occur, it is not evident whether they have a reciprocal relationship or a common etiology (Mason & Windle, 2002). In a reciprocal relationship, involvement with substances might lead to lowered inhibitions and the development of peer relationships which encourages criminal involvement. In effect, criminal involvement can result in additional opportunities to participate in using behaviour. In contrast, are both criminal behaviour and substance use caused by a common factor? In other words, the relationship between offending behaviour and substance use could be spurious because of common causal factors. For example, in one study, gender differences in the developmental process were identified; adolescent drug use and delinquency in boys appeared mutually reinforcing while use and criminality among girls appeared to result from shared influences that increase risk of both behaviours (Mason & Windle, 2002). It is possible that the gender difference resulted from an increased risk of childhood abuse in female youth. In other words, early female victimization can be a factor that increases the risk of later engagement in both problematic substance use and criminal involvement.

Mason and Windle (2002) used a homogeneous sample of high school youth. They gathered data on the use of substances (i.e., cigarettes, marijuana and alcohol) and involvement in aggressive behaviour, property damage and theft. As stated above regarding the differences between youth in custody and youth in school, the Mason and Windle (2002) subjects differed significantly from the youth who are examined in this thesis. The majority of the Mason and Windle (2002) subjects were White, Catholic, middle-class, from natural families and did not demonstrate significant problematic use, while this thesis focuses on at-risk female youth, most of whom have experience in youth custody, did not attend school prior to entering treatment, may be from unstable family groups characterized by substance use, abuse or neglect, are polydrug users, and who are involved in various criminal behaviours. It could be argued that the relationship between substance use and criminal behaviour would be different for the subjects of this thesis and that using high-risk, high-need subjects would diminish the gender differences found. Or, studies using a population similar to this thesis might find that variables like childhood victimization play a causal role in developing co-occuring problem behaviours in adolescence.

In contrast, Allen et al. (1994) argue that multiple pathways result in co-occuring problem behaviours. In effect, a specific problem behaviour might have multiple etiologies, depending upon the context within which the behaviour develops. Allen et al. (1994) asserted that use of alcohol and marijuana predicted increases in both offending behaviour and use of hard drugs. This relationship between early use and later increased use and offending behaviour

was correlated with youths' expectations in interpersonal situations. Allen et al. (1994) theorized that some youth misinterpreted social cues as hostile and, lacking adaptive ways of engaging in social situations, choose maladaptive behaviours. In other words, it is youths' social misperceptions that cause the development of maladaptive behaviours. In turn, treatment should focus on the development of social skills and ability to correctly interpret vital social cues.

The above research, therefore, is inconclusive about the relationship between substance use and offending behaviour, even though they often co-occur. Most critically, it is unclear if early behaviour problems (perhaps resulting from misunderstanding social interaction) encourage earlier onset of use which, in turn, promotes continued and more severe use. Finally, is the combination of problematic use and ongoing behaviour problems which result in legal problems an additional cause of ongoing use and further criminal activity because of the development of relationships with peer groups who reinforce these behaviours? In contrast, are both criminal activity and substance use caused by the same variable and, therefore, the correlation between the two is spurious? Yet, regardless of whether use and criminality share a common cause or are reciprocally related, the above research indicated that youth develop more severe forms of these behaviours over time, and require interventions favouring adaptive behaviours. In effect, treatment for youth justice clients should reduce the risks associated with both problem behaviours by addressing individual needs and reducing recidivism despite the lack of research consensus about their theoretical relationship.

CHAPTER 3: BRITISH COLUMBIA'S YOUTH JUSTICE SYSTEM

This chapter will examine the process by which youth become adjudicated treatment clients in British Columbia. Federal youth justice legislation will be examined, in light of its impact on the utilization of alternative to custody programs. As the program under examination has been in operation since 2000, it has served clients sentenced under both the *Young Offenders Act* and the *Youth Criminal Justice Act.* The concept of the female young offender will also be examined to encourage a more complete understanding of the needs of the clients examined in this thesis.

3.1 BCs Youth Justice System

Youth between the ages of 12 and 17 years who violate provincial or federal legislation may be processed through British Columbia's Youth Court system. There are a series of discretionary decisions made at each stage of the administrative process that brings a youth before the court. Initially, youth who commit a criminal offence do not always come to the attention of police. However, when they do and the alleged offence is minor in nature, the police have the discretion to release the youth, issue an informal or formal warning or involve the youth's parents. If the alleged offence is serious, the police can arrest the youth (Carrington & Schulenberg, 2003). In the latter situation, youth

may be released without charge, diverted to extrajudicial sanctions, or charged[1]. If charged, the youth is usually provided with either an appearance notice, Promise to Appear (with or without an Undertaking involving conditions) or summons, and then released (Carrington & Schulenberg, 2003). Youth are held in custody on remand until arraignment when there is cause to believe the youth will either not appear for court or likely present a danger to themselves or others. If the youth is arrested and charged, the particulars of the offence are forwarded to Crown counsel. Crown counsel screens all recommendations and determines if there is sufficient evidence to charge the youth. Once charged, an arraignment hearing occurs and a plea is entered (Griffiths & Verdun-Jones, 1994). If the youth pleads guilty, a sentencing date is set. If the youth pleads not guilty, a trial date is set and, if the youth is found guilty, a sentencing date is then set. Sentencing options under both the *Young Offenders Act* and the *Youth Criminal Justice Act* are explored in the next section. As well, sentencing is discussed regarding how sentencing options are linked to the program examined in this thesis.

3.2 Relevant Legislation

The youth in the program under examination in this thesis were sentenced either under the *Young Offenders Act* or the *Youth Criminal Justice Act* and received, at minimum, an order of community supervision with a condition to

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[1] Extrajudicial sanctions and police warnings are not fully explored in this section as only sentenced youth attend the program under examination.

attend residential treatment. This section will examine the sentencing provisions of the YCJA, in comparison to the YOA, and explain the relevance to program admission.

The *Youth Criminal Justice Act* (YCJA) clearly articulates the objectives of sentencing. The legislation seeks to hold youth accountable by imposing just and meaningful consequences which aid in reintegration and rehabilitation and contribute to the long-term protection of the public (s. 38(1)) (Department of Justice, 2006a). Under the YCJA, several custodial and non-custodial dispositions are available to meet these objectives. The YCJA explicitly attempts to limit the use of custodial sentences, except in specific circumstances such as youth who are either found guilty of a violent offence (s. 39(1)(a)) or have demonstrated an inability to comply with previous non-custodial sentences (s. 39(1)(b)). Custodial sentences also are used either when the youth commits an offence for which an adult would receive at least two years imprisonment (s. 39(1)(c)) or in exceptional circumstances where the youth commits an indictable offence where the aggravated circumstances are such that non-custodial sentencing would be inconsistent with the sentencing objectives of the legislation (s. 39(1)(d)) (Department of Justice, 2006a). Even when one of the above criteria is met, the court still must examine all alternatives to custody, and ensure that the sentencing objectives could not be met by an alternative, or combination of alternative sentences (s. 39(2)).

As an alternative to custodial dispositions, several community-based sentencing options are available under the YCJA: Custody and Community Supervision; Deferred Custody and Supervision; Intensive Support and Supervision; and Probation Orders (Department of Justice, 2006a). Community-based supervision orders may be in addition to a custodial sentence or may replace custody; these orders may also be organized sequentially, so youth are subject to lessening restrictions over a period of time in the community. Regarding custody and rehabilitation needs, Intensive Rehabilitative Custody and Supervision Orders (IRCS) are available for serious violent offenders whereby treatment occurs during a period of custody and during a well-structured period of supervision in the community.

Youth who meet the strict criteria for custodial sentencing under the YCJA and are sentenced to custody also receive a community supervision order: In any Custody and Community Supervision Order (CCSO), the length of community supervision is half the length of custody time imposed (Department of Justice, 2006a). Under the YCJA, any custody term is followed by a period of community supervision. The purpose of a CCSO is to provide support and supervision to youth leaving custody to aid in reintegration. A Deferred Custody and Supervision Order (DCSO) can be utilized instead of custody, and acts much like a conditional sentence. Youth are provided the opportunity to abide by conditions in the community; if they fail to do so, they may serve the remainder of their DCSO in custody (Department of Justice, 2006a). A DCSO may be imposed for a maximum of six months, but can be followed by an additional

community-based order (e.g., Probation Order). Youth could also receive an Intensive Support and Supervision Order (ISSP), which outlines specific conditions for supervision in the community. ISSP orders have been reviewed as a possible alternative to the "short, sharp shock" incarcerations that were common under the YOA (see Brodie, 2005). As mentioned above, Intensive Rehabilitative Custody and Supervision Orders (IRCS) are available for youth convicted of serious violent offences; specifically, youth convicted of first or second degree murder, attempted murder, manslaughter or aggravated sexual assault (Department of Justice, 2006a). IRCS orders allow for treatment in custody, followed by wraparound treatment services during a period of community supervision. The purpose of IRCS orders is to provide high-need, high-risk youth with rehabilitative services that will aid in reintegration to the community. Unlike the *Youth Criminal Justice Act*, community supervision orders under the *Young Offenders Act* were limited to Probation Orders.

The program under examination in this thesis operates as an alternative to custody. Youth who attend the program have received a sentence requiring supervision within the community. These youth may enter the program on a combination of any of the orders explained above, if the length of the order and the conditions are sufficient for mandating attendance at a treatment program. For example, many youth released from custody would enter treatment on a Custody and Community Supervision Order, which may be followed by an ISSP or Probation Order. The order(s) under which a youth attends must have a suitable condition requiring the youth to attend full-time residential addiction

treatment and must be of sufficient length to see the youth through the waitlist and six month treatment program. Although perhaps eligible to attend the program under an IRCS order, none of the youth admitted to date have been on an IRCS order.

The previous sections have explained the process by which female young offenders would be charged, sentenced and admitted to the program under examination; the following section will examine the concept of the female offender and will emphasize the unique needs of this population.

3.3 Concept of the Female Offender

It has been demonstrated that criminal justice involvement and substance use are strongly correlated in both male and female youth. In addition, female youth with these co-occuring behaviours are more likely to report histories of abuse, both sexual and physical. Although research supports that the needs of female young offenders are unique and multi-faceted, the criminal justice system has not historically responded to those needs appropriately or effectively.

Traditionally, female youth have been punished more harshly for minor transgressions (see Hoyt & Scherer, 1998). Under the *Juvenile Delinquents Act* (1908), youth were subject to sentences for status offences related to waywardness and moral depravity, including incorrigibility, drug use, needing care and protection, and sexual immorality. Although not criminal in nature, these offences allowed for increased supervision, protection and control of

misguided youth. However, this paternalistic legislation created a sexual double standard; traditional gender stereotypes allowed "boys to be boys", while girls who transgressed norms of femininity were deemed to need correction. The decriminalization of status offences with the implementation of the *Young Offenders Act* (1982) resulted in an increase in administrative charges against female youth (Reitsma-Street, 1993). Under the YOA, 25% of the charges heard in youth court for females were administrative offences, including failing to comply with a disposition, failing to appear or breaching a court order (Reitsma-Street, 1999). These administrative offences can result in additional charges and custodial and community supervision for the young person meaning that a female youth convicted of a relatively minor offence may be subject to increasingly onerous supervision despite a low-risk of accruing new charges (i.e., other than administrative charges). For example, a youth may be sentenced for a minor property offence (e.g., theft under $5000) and receive a probation order. If the youth fails to abide by their conditions (which could include residing at home, not having contact with friends or boyfriends, a curfew, and/or not attending at certain areas of town), then they may receive additional sentences, including custodial dispositions. In effect, this results in relatively low-risk, high-functioning youth being completely entrenched in the youth criminal justice system. These youth are labelled, introduced to criminally-involved peers and disconnected from their family, school, peer group and community.

Arrest and charge for violating previous court orders is referred to as "bootstrapping" (Hoyt & Scherer, 1998), allowing for increased supervision and

control of female youth with minor criminal histories. In examining the typical social history of female youth in conflict with the law, several factors influence a youth's ability to abide by court ordered conditions; a youth may be in a dysfunctional home, have substance misuse issues and/or mental health concerns, have minimal connection to prosocial peers, etc. While the court intends to protect the youth from negative influence and future criminal involvement (and/or victimization), restrictive conditions can disconnect youth from the only supports they know. The consequence for maintaining these connections is additional charges and often, a custodial sentence. In addition, the level of supervision exercised by the probation officer impacts further administrative charges. There is a great deal of discretion exercised by probation officers in submitting administrative offences to the Crown; thus, entering charges is as much a reflection of the probation officers professional practice as it is of the youth's behaviour.

Gender differences still exist in the formal processing of youth. Females tend to be informally processed more than males but are also involved in the criminal justice system for less serious offences (Poe-Yamagata & Butts, 1996). According to US statistics, offences with a high percentage of female arrests include running away from home, prostitution, forgery, counterfeiting, embezzlement and offences against family and children (Poe-Yamagata & Butts, 1996). Females also tend to be treated more harshly than males for similar crimes (Hoyt & Scherer, 1998). Under the *Youth Criminal Justice Act* (2003), custodial dispositions should be reserved for "violent and serious repeat

offenders" (Department of Justice, 2006b). However, in a study of incarcerated youth in British Columbia, it was found that 63% of the youth incarcerated were charged or convicted with an administrative offence (i.e., breach or escape) (McCreary Centre Society, 2005). Custodial sentences are appropriate if a youth has failed to comply with non-custodial sentences, if other alternatives are not appropriate. However, for high-need female youth, other alternatives may be more appropriate and more effective than custodial dispositions.

Where custodial sentencing may serve to address externalized behaviour issues, incarceration is not effective at addressing the internalizing behavioural needs of female youth. That is, the high level of control, structure and supervision in a custody centre may prevent youth from "acting out". However, the custodial environment may not serve to address the underlying causes of acting out behaviour. As seen, female youth in conflict with the law are more likely to have a history of trauma and abuse, substance misuse issues, unstable living environments, mental health concerns (especially depression and suicidal ideation), parental conflict, poor school performance and poor self-esteem. Youth with multiple problems are the most difficult to treat; they tend to have "a more chronic course, greater impairment in global role functioning, poorer prognosis, and tend to be les responsive to treatment compared with single-disorder cases" (Beitchman et al., 2001, p. 422). Female youth with co-occuring problem behaviours are at high risk and their unique needs are not adequately met through a punitive response that focuses on externalized behaviour.

Youth, on average, do not spend long periods of time in custody, making it difficult to provide programming activities to address correlates of criminal involvement, including trauma, abuse and substance misuse (see Reistma-Street, 1993). As noted by Cavaiola and Schiff (1989), high-need youth often require long-term therapeutic interventions. With multi-problem youth, this involves first addressing their substance use so other related issues can be explored. However, as substance use acts as a coping technique, detoxifying from substances can be extremely difficult for a youth, involving feelings of guilt, shame and further negatively impacting self-esteem (Cavaiola & Schiff, 1989). Although unofficially used as a place for youth to detoxify from substances and protect youth from further substance use (see Corrado et al., 2000), custody centres are not an ideal setting for beginning the treatment process. Also, the environment of a custody centre is not therapeutic or conducive to conducting meaningful trauma, abuse or addictions counselling. Although correctional programs do operate in custody centres, providing youth with access to integrated services in the community could better address the specific needs of adjudicated female youth with substance misuse issues.

3.4 Community Supervision and Adjudicated Treatment

Adjudicated treatment options provide an alternative to custody, allowing youth to remain in the community and receive supervision and support while addressing internalized issues. As part of their recommendation for sentence, the youth's probation officer may suggest attending an intensive residential treatment program. If the youth receives a suitable community supervision order,

they may attend the program as an alternative to custody. In this thesis, the program under examination operates as a highly structured, comprehensive program that focuses on building competency and practicing skill development in the community.

There are objections to adjudicating youth to attend treatment and some argue that coercing a youth (through a court order) to attend treatment violates the therapeutic alliance. It is further argued that meaningful change will not be made unless the client chooses to engage in the treatment process. Some researchers have also examined systemic discrimination leading to the overuse of adjudication based on gender and race (see Beckerman & Fontana, 2001). However, adjudicated addiction services provide an opportunity for precontemplative youth to be introduced to available services and to increase their insight into their substance use and criminal behaviour. The process of change generally requires numerous attempts (Prochaska, DiClemente & Norcross, 1992) and adjudicated services may provide a starting point for clients to begin to examine their behaviour. Adjudicated services may move youth from precontemplation to contemplation, and although minimal behaviour change will be observed, this progression is an integral step in provoking intentional change in the future.

CHAPTER 4: TREATMENT ISSUES AND WHAT WORKS

The following section will focus on predicting engagement and retention in treatment services. Determining what factors influence a youth's ability to participate and remain in treatment is important so the treatment program under examination in this thesis can be evaluated and improved for those youth with serious barriers to overcome. Information on engagement and retention will allow existing treatment programs to ensure they are low-barriered services that meet the needs of referred clients and attempt to individualize service for even the most hard-to-reach youth.

Several variables influence engagement and retention in addiction services; precontemplative, adjudicated youth are a distinctly challenging group to engage. As seen below, age, motivation and willingness and court-ordered status predict attrition in treatment programming.

4.1 Motivation and Willingness of Adjudicated Clients

As the subjects under examination in this thesis are adjudicated clients in a residential treatment program, it is important to explore the impact of motivation and willingness to attend treatment as a factor influencing engagement and retention. The youth attend treatment as an alternative to custody and most are precontemplative (Prochaska & DiClemente, 1983) with respect to their substance use. Research has shown that readiness for change is related to

referral source (e.g., court-ordered vs. self-referred clients), with more adjudicated clients being at the precontemplative stage (O'Hare, 1996). Sinha et al. (2003) compared the treatment outcomes of probation-referred young adults with older adults in a community outpatient program. The subjects were not youth but young adults (aged 18-25 years) but were similar to adolescents in terms of their early age of onset of use and their problematic substance use patterns (Sinha et al., 2003). The young adult group scored higher on measures of precontemplation, were less likely to complete treatment (65% did not complete, compared to 54% of the older group), and were less likely to be drug-free at discharge (30%, compared to 70% of the older group). Based on their findings, the researcher suggests the use of motivational approaches to assist young adults in moving past the precontemplative stage and to help clients transform external legal consequences into internal motivators.

4.2 Age and Intensity of Use

Generally, older clients are more engaged and likely to complete treatment than their younger counterparts (Rempel & DeStefano, 2001; Dakof et al., 2001). This could be due to the fact that younger people are more entrenched in a deviant lifestyle (including criminal activity), are supported by like-minded peers and have not yet suffered significant negative impacts from their lifestyle choices. Age, in itself, may not be a predictor of engagement and retention, but older clients may be more severely entrenched in drug use and criminal behaviour, may suffer more negative consequences from this involvement and thus, may be more motivated to change. This idea has been

supported by Breda and Heflinger (2004), who assert that age alone is not a predictor of engagement, but that severity of substance-related adversity generally increases with age. Subsequently, the negative consequences of using, or "hitting rock bottom" motivates clients to make positive changes through the treatment process. So, the relationship between age and engagement and retention may be spurious resulting from awareness of the negative consequences of use increasing with age and thus, increasing readiness to change.

Given the relationship between problematic use and treatment retention, one might expect that more severe use would result in more negative consequences and subsequent increased engagement. However, extant research is conflicting over the effect of intensity of use on treatment engagement and retention. Some studies support the idea that those with more severe addiction issues are more likely to drop out of treatment (Rempel & DeStefano, 2001). This could be related to severe withdrawal symptoms. Others have found that self-reports of greater difficulty with alcohol and other drugs is a predictor of program completion (Blood & Cornwall, 1994). As above, it can be argued that these youth have clear insight into the negative consequences of their use and thus, display more readiness to change than a precontemplative client who is unaware of their problem behaviour.

4.3 Consequences and Coercion

The impact of legal consequences or coercion in treatment engagement is often examined. Research shows that coercion increases the probability of treatment engagement (Rempel & DeStefano, 2001) but the individual's response to coercion or perceived consequences can affect this interaction. Maxwell (2000) found that the perception of threat encouraged engagement, regardless of the client's actual legal status. Others argue that legal consequences can encourage retention (Breda & Heflinger, 2004), but cannot, alone, result in client engagement or positive treatment outcomes. In addition, adjudication can encourage retention if there is comprehensive supervision and communication between service providers and referring agents (Henggeler et al, 2006).

As seen in the discussion of predictors of engagement and retention in addiction services, the impact of certain variables depends upon the clients understanding and perception of the variables. Motivation and willingness to participate is of paramount importance in positive treatment outcomes. Motivation is affected by age, intensity of use, substance-related adversity, and the perceived consequences of non-compliance. Adjudicated youth may be precontemplative at intake into a residential attendance program and may choose to attend as the lesser of two evils (i.e., residential treatment vs. custody). Perception of legal consequences may retain the youth but treatment staff and programming activities are necessary to engage the youth and help them progress through treatment. A key aspect of engagement is increasing

awareness of the negative consequences of substance use (i.e., consciousness-raising). Programming activities focus on habilitating youth and developing the skills necessary to reduce problematic substance use and criminal involvement. This thesis examines factors that influence positive treatment outcomes and attempts to speak further to predictors of engagement and retention in adjudicated female youth.

The clients under examination in this thesis are high-need, multi-problem female youth who have a poor chance of engagement and retention in treatment services because of their age, level of willingness and lack of insight into their substance-related adversity. In the following section, treatment efficacy will be discussed. The measure of "success" in treatment is very subjective; addiction is an individual experience, thus, progress is very difficult to measure. Although an intervention may not result in immediate and dramatic behaviour change, the intervention can act as one step in the journey for a precontemplative client to make significant changes in their lives. In effect, for precontemplative youth, "success" may not be immediately measurable.

Research supporting the efficacy of various treatment models will be discussed, specifically exploring the use of 12-Step programs, cognitive behavioural therapy, family systems therapy and therapeutic communities with youth. The specific challenges and need areas of adjudicated youth (specifically female youth) will be discussed.

4.4 Efficacy of Various Treatment Models for Youth

Research on the efficacy of various treatment models supports the use of some treatment interventions over others. However, from a biopsychosocial spiritual perspective, the individual experience of addiction and the need for individualized services results in different treatment models being more or less effective for certain people. In discussing the efficacy of treatment models, it is important to emphasize that the population examined in this thesis is one of the most challenging populations to engage and retain in treatment. The subjects of this thesis are adjudicated youth who attend residential treatment as an alternative to custody. The youth are, generally, highly resistant and unmotivated. Most youth would be precontemplative in the Stages of Change Model, non-compliant, and present with behavioural issues, anger problems and mental health concerns. Most evaluation research on treatment models does not utilize such a population. However, the research on the various treatment models will be examined and predictors of engagement and retention will be discussed, as they apply to the specific population under examination.

Specifically, the following section will explore outcome evaluation research for youth populations involved in 12-Step treatment, cognitive behavioural therapy, family therapy and therapeutic communities.

4.4.1 Minnesota/12-Step Model

The Minnesota or 12-Step Model is the most widely used treatment model for adolescents (Muck et al., 2001). This is most likely related to the availability

of 12-Step-based treatment programs in the US and the availability of NA/AA support services in the community 24 hours per day, 7 days per week.

In Winters et al. (2000), the impact of 12-Step treatment was examined by comparing long-term outcomes amongst completers, non-completers and those who were on a waiting list. Residential and out-patient 12-Step treatment models were also compared, through attempts at standardizing amount of treatment contact for the two conditions. Abstinence was the prescribed goal of treatment and follow-up measures of drug use frequency were examined at six-months and one year follow-up points. The results demonstrate that treatment retention and completion significantly impact treatment outcomes; at the one year follow-up, 53% of the completers were abstinent or had suffered a minor lapse, compared to 15% of the non-completers and 27% of the waiting-list group (Winters et al., 2000). The difference between the non-completing and waiting-list group was insignificant. Although treatment outcomes were better for those completing 12-Step treatment, only 19% of the completers maintained abstinence for the one year follow-up (Winter et al., 2000). No significant differences were found between the residential and out-patient treatment conditions.

Examining longer-term impacts of 12-Step treatment supports less significant outcomes. In a comparison of completers and non-completers of a 12-Step treatment program, the difference between those who were abstinent or had suffered a minor lapse at one year post-treatment was 29% (completers) to 18% (non-completers) (Alford et al., 1991). At the two year follow-up, only 27%

of completers maintained abstinence/minor lapse, while 23% of non-completers reported similarly (Alford et al., 1991). Although a significant difference may be noticed in short-term outcome evaluations of 12-Step treatment, those differences seem to diminish over the long term.

Twelve-step treatment can be applicable for youth with substance misuse issues; however, it is generally only accessed by voluntary clients. The Minnesota Model requires that clients be voluntary, motivated and willing to attend. The model is not suitable for adjudicated, precontemplative, highly resistant youth.

4.4.2 Cognitive Behavioural Therapy

Treatment based on cognitive behavioural therapy (CBT) recognizes that problematic substance use is a learned behaviour, reinforced through classical and/or operant conditioning. Behavioural approaches look at the factors causing and maintaining substance use and teach alternative behaviours that can meet those needs. Youth are taught to examine current perceptions, thoughts and behaviours and learn new prosocial coping strategies.

One technique used within a cognitive behavioural approach is motivational interviewing. These brief interventions focus on building rapport with the client and increasing commitment to change; interventions are based on the principles of harm reduction and are individualized to client needs. Motivational interviewing is incorporated into the Stages of Change Model (Prochaska &

Diclemente, 1983) and encourages helping professionals to empower clients to facilitate their own behaviour change (O'Leary Tevyaw & Monti, 2004). This technique is suitable for youth at any stage of willingness or motivation; interventions include stimuli control, self-evaluation and consciousness-raising. Research demonstrates that motivational interviewing is an appropriate intervention for those intensely involved in substance use and for individuals with less motivation for change (O'Leary Tevyaw & Monti, 2004). Therefore, it could be very beneficial with the subjects of this thesis; precontemplative youth who are involved in criminal behaviour and problematic use.

Comparisons between cognitive behavioural-based treatment models and other treatments have been made. Research supports that CBT results in decreased use of substances compared to insight-oriented therapy and psychoeducational treatment (Kaminer et al., 1998; Kaminer, Burleson & Goldberger, 2002). These results, like the impact of 12-Step treatment, were found to diminish over time (Kaminer & Burleson, 1999). The importance of matching clients with appropriate cognitive behavioural techniques has been discussed; "youth with co-occurring delinquency and depression, more severe drug use, negative attitudes toward school and deviant peers were more likely to continue their problem use or experience relapse" (Waldon & Kaminer, 2004, p. 100-101). This is relevant to this thesis, where the youth under examination are demonstrating multiple problem behaviours, are not generally engaged in school and are entrenched in like-minded peer groups.

The difficulty with outcome evaluations of cognitive behavioural treatment may be in the focus on learning new adaptive skills and coping techniques without introducing a prosocial environment in which the youth can utilize their new skills. Skill development (including communication, assertiveness training, anger and stress management, etc.) might be very beneficial in prosocial interactions. However, the multi-barriered youth discussed above may not utilize these skills and may return to non-adaptive techniques as a way of surviving in a dysfunctional environment. For example, effective communication skills may be incompatible with a substance abusing parent. In effect, the primarily short-term benefits of CBT might be a result of youth returning to a high-risk environment where prosocial skills and techniques may not be adaptive.

Further research efforts should focus on the impact of follow-up cognitive behavioural treatment and should examine the effects of dysfunctional social relations post-treatment on outcome efficacy.

4.4.3 Family Therapy

Family systems therapy views the family as made up of several subsystems (e.g., parents, children, extended family) each with its own roles. Therapy focuses on examining healthy boundaries and examining how the subsystems function as part of a larger whole. Interventions focus on examining interactions, improving communication and relationships and clarifying boundaries (Muck et al., 2001). Research on the efficacy of family therapy with criminally-involved youth shows mixed results. In one study, youth in family

therapy had significantly fewer substance-related arrests following treatment than those youth who participated in individual counselling (Henggeler et al., 1991). Compared to adjudicated sanctions alone (e.g., probation conditions to attend school or abide by a curfew), youth involved in family therapy reported less use of marijuana and alcohol post-treatment (Henggeler et al., 1991). However, in comparing youth in family therapy with youth referred to community services (including outpatient counselling, 12-step meetings, adolescent support groups, etc.), no significant differences were found with respect to drug use or criminal activity (see Muck et al., 2001 for complete review).

Family involvement is important in encouraging positive social relationships and functioning. Although the impact of family therapy compared to other interventions may be mixed, involving the family in any treatment model can benefit both the youth and their family. The program under examination in this thesis attempts to involve significant family supports in case management and provides the opportunity for all clients to participate in family counselling.

4.4.4 Therapeutic Communities (TCs)

Therapeutic Communities are long-term residential programs generally between six and 18 months for high-risk, high-need clients (see Muck et al., 2001; National Institute on Drug Abuse, 1999). TCs provide a supportive and highly structured treatment environment where residents develop more adaptive beliefs, values and behaviours. The TC allows for peer interaction and support and allows for residents to develop skill sets in a structured micro-community.

Within the communities, treatment components, schooling, individual and group therapy, recreational activities and training are scheduled throughout the day and evenings. Residents are responsible for being productive members of the community; each youth has a job. Families are often involved in the therapeutic process.

A study of effectiveness examining nine TCs found that approximately 44% of adolescents completed their programs. At the six month follow-up, significant reductions were found in inhalant, hallucinogen and methamphetamine use and over 66% reported their alcohol use to be non-existent or greatly reduced (Muck et al., 2001).

The treatment program under examination in this thesis is a six-month residential program[2]. This program is similar to a Therapeutic Community, in that it is a highly-structured, supportive environment that focuses on skill development. Peer support is important and youth develop skills that they can practice in a home-like environment and in the community under supervision. The residential treatment program differs from TCs in the length of treatment and in the staffing model; clients in Therapeutic Communities stay for extended lengths of time, and TCs are generally staffed by prior clients (Muck et al., 2001). The intensive residential program that is the focus of this thesis is staffed by professionals with a variety of backgrounds and training, some of whom may

[2] During the first contract year (June 2000-March 2001), the treatment program was four months in length. Since April 1, 2001, the program has operated as a six-month program.

have a history with problematic substance use and/or criminal behaviour and some who do not. In addition, the treatment program under examination attempts to foster positive interaction in the community to aid in reintegration, where Therapeutic Communities operate as their own micro-community.

Given the discussion of various treatment modalities, the treatment components of the program under examination will be explored. The treatment program is evaluated in light of research on engagement and retention and on treatment efficacy.

4.5 Program Information

The program under examination is an intensive residential treatment program that serves adjudicated and non-adjudicated female youth from British Columbia; only the adjudicated youth are included in this analysis. The program is funded through the Ministry of Children and Family Development and thus, serves youth 12 to 18 years of age. The youth are referred to the program by their probation officer and must have a sufficient condition to attend residential treatment on their community supervision order. That is, attending the program is part of a community-based sentence the youth has received from a judge; failure to comply with that sentence may result in additional charges being laid against the youth.

The young women referred to the program are generally high-need youth with extensive criminal histories. For the most part, their criminal involvement is

integrally linked with problematic substance use. For example, youth may be involved in theft, fraud, or prostitution to provide an income for purchasing the drugs they need. Similarly, youth may be involved in assaults or robberies when overly aggressive and under the influence or withdrawing from substances. The youth served also have a variety of other need areas, including behavioural concerns, mental health issues, learning difficulties and a history of family dysfunction. The key characteristics of the clients served will be examined in more detail in the following sections.

The program uses a unique residential/day centre approach. The youth attending the program live with specialized foster parents who have extensive experience with withdrawal management and addressing addiction issues. This model allows youth to live in a naturalized home environment, while attending the treatment centre during the days, evenings and weekends for programming. Using the host-home model allows youth to transfer the skills they are developing in treatment to the community, so treatment progress is not isolated from real-world experience. In addition, research has found that youth are more willing to access addiction services if the environment is comfortable; youth tend to prefer home-like settings to institutional or medical settings (see Potthof, 1995). The program currently operates as a six-month program; at program inception (in 2000), the contract limited program length to four months.

The program incorporates detoxification, core treatment and reintegration into the treatment process. This provides a low-barriered service in that youth do

not need to detox before attending treatment; some services require clients to have 72 hours of "clean time", significantly impacting their ability to attend treatment. Core treatment activities include teacher-supervised education (i.e., on-site school program); individual, group and family counselling; psychosocial educational components; and social, cultural and recreational activities. Individual treatment planning is conducted with each youth, in collaboration with their referring agent and other members of their care team (e.g., parent, addictions counsellor, social worker, etc.). Treatment planning is a continuous process of assessing the client and matching applicable service delivery techniques. If needed, youth will be referred to additional community resources.

The core treatment curriculum utilizes a cognitive-behavioural approach. The curriculum focuses on habilitating youth by building skill sets in various areas, including: anger management, communication, relationship building, self-esteem and decision making. Relapse prevention planning occurs throughout. Individual and group programming focuses on the skill area under development. Social, recreational and cultural activities reinforce skill set development and introduce the youth to prosocial activities they can continue post-discharge. A reward system is used to reinforce the development of more appropriate responses. More specific information on the core treatment curriculum is included in Appendix 1.

The youth also participate in on-site schooling; educational work is individualized and self-paced. Being reintegrated into a school setting helps

youth increase feelings of competency and self-esteem. The youth participate in psychosocial educational sessions to increase their insight into the negative consequences of substance use. Youth participate in individual and group counselling sessions. Individual sessions focus on building a therapeutic alliance and use motivational interviewing techniques. Group sessions focus on the skill area under development, providing the youth the opportunity to support one another in the treatment process and share experiences. Family counselling is an optional component in the treatment program; some youth do not feel comfortable involving their family (biological or otherwise) in their treatment. However, most youth do use the opportunity to improve communication and relationships with their family during the program. As the majority of youth return to their family post-treatment, family counselling provides an opportunity for the family to explain their perspective, set boundaries and create meaningful dialogue.

The program is highly structured with 24-hour supervision; supervision is facilitated, either by program staff, foster parents or approved adults. To aid in reintegration, youth may earn unsupervised time and practice new skills in the community. Although there is a high level of supervision, the program does not operate as a closed centre; youth are not physically contained in the program and are free to leave at will. A high level of supervision is required to ensure that the youth feel safe and secure within the program. However, the level of supervision cannot compromise the therapeutic environment; supervision needs to be an element of engaging the youth, rather than "watching over" or "guarding"

the youth. Urinalysis is used periodically to ensure youth are not actively using while in the treatment program. However, relapse does not necessarily lead to discharge. If youth are willing to examine the reasons for relapse and recommit to their recovery, they may be able to continue in the program.

As demonstrated, the program uses an approach that combines many of the treatment elements discussed above. The program focuses on skill and competency development and learning pro-social coping techniques. The program provides individual, group and family counselling; "counselling and other behavioural therapies are critical components of effective treatment for addiction" (NIDA, 1999, p.4). Family involvement has also been demonstrated to be an important variable in positive treatment outcomes. The program under examination in this thesis is holistic and focuses on empowering female youth to make positive changes in all aspects of their lives.

As the program incorporates the key aspects of effective addiction treatment into a comprehensive program, it is hypothesized that the youth who attend the program will demonstrate improved functioning compared to those who did not. Similarly, as recovery is a long-term process and "remaining in treatment for an adequate period of time is critical for treatment effectiveness" (NIDA, 1999, p. 3), it is hypothesized that the youth that complete the program will demonstrate improved functioning compared to those who did not complete.

CHAPTER 5: METHODOLOGY

In this thesis, functioning was measured in terms of recidivism post-treatment. This was not the ideal measure as it does not provide a comprehensive picture of the progress gained in treatment, but it was the most feasible in terms of data collection. Ideally, follow-up would involve self-reports from past clients on functioning in key life areas (including criminal justice involvement and substance use) and collateral reports from parents/caregivers and/or probation officers and Cornet to ensure accuracy. Obviously, it would be extremely time consuming to track down all past participants of the program and conduct intensive follow-up surveys with the clients, their parents and probation officers. In some cases, over five years has passed since the youth participated in the treatment process. It would be invasive to make contact after such significant time had passed and could compromise privacy and confidentiality.

Recidivism is a measure that could be obtained through Cornet access. So, for the purpose of this study, the hypotheses are as follows:

5.1 Hypotheses

1. Adjudicated youth who complete the intensive residential addiction treatment program will demonstrate less recidivism than those who did not complete the program and those who were not admitted to the program.

2. Youth with multiple problems (including a history of abuse and/or neglect, parental substance use, mental health concerns, poor school performance) will show more difficulties with retention and engagement in the program.

5.2 Sampling

The program began in June 2000; data on all adjudicated youth referred to the program was collected from program inception (June 2000) to the end of the last fiscal year (March 2005). All youth referred to the program are reviewed for suitability by a screening committee; the monthly summaries of the screening committee meetings and cancelled and accepted referrals were reviewed. The total number of adjudicated youth referred to the program during this time was 145. Of these, two of the referrals were incorrectly categorized as adjudicated youth. In effect, the referrals were received from probation officers, but the youth were also referred through a community addictions counsellor. Those two youth were admitted as non-adjudicated youth and thus, were removed from further analysis. Another client was removed from analysis because their file was unavailable and no data could be collected. This brought the total number of cases to 142.

Of the 142 adjudicated clients examined, 66 were referred to the program, deemed suitable by the screening committee, but never admitted in to the program. Most commonly, these youth were not admitted because: they were unavailable to attend treatment (i.e., in custody, AWOL or in another program); their order was insufficient (i.e., not long enough to see youth throughout

treatment or no condition to attend residential treatment); their probation officer declined the bed as the youth was not treatment ready; or the youth stabilized within the community and no longer required intensive residential services. These 66 cases comprise the non-treatment condition. Although many of these referred youth accessed other addiction services and may have attended another residential treatment program, since they did not attend the program under examination in this thesis they were identified as "non-treatment" for ease in distinguishing them from the treatment condition.

The remaining 76 youth were referred to and admitted into the treatment program and comprise the treatment condition. Although these two groups were not matched for equivalency, they all met the criteria of the screening committee, were deemed suitable for admission, and no significant differences were found between the two groups on any of the variables examined. The treatment and non-treatment conditions are compared on all variables in Appendix 5.

5.3 Collection

A coding table was used to collect information on the 142 cases (see Appendix 2). For the non-treatment condition, information was coded from referral packages only. This caused difficulty as some of the referral packages were incomplete. Referral packages are completed by the referring agent (i.e., probation officer) with input from the youth (e.g., with respect to current level of substance use, age of onset of use, etc.). Often, youth who are actively using will not meet with their probation officer regularly and will not provide the

necessary information to complete the referral package. This results in incomplete or inaccurate information. There is also discrepancy in the amount of information known by the referring agent. In some cases, probation officers have worked with the youth for a long period of time, have built a good rapport and are privy to more truthful information. In some cases, the probation officer has recently been assigned the youth and has conflicting information on their social history and substance use. Referring agents may also enhance or downplay certain aspects of the youth's history or current situation to encourage a prioritized intake to treatment. Lastly, the referral package information does not include ethnicity, but does differentiate referrals for Native youth. The intake process does ask youth to self-identify their ethnicity. This resulted in what appears to be difference between the treatment and non-treatment groups in terms of ethnicity, but is caused by a lack of more detailed referral information.

In addition, some referrals contained collateral information (e.g., court orders, predisposition/presentencing reports, psychological assessments, etc.). Although the collateral information was helpful, in some cases the referral information contradicted the collateral information. For example, the referral package stated that the youth has not had a history of self-harm while the psychological assessment reported on self-harming behaviour. In cases where discrepancy was noted, the information available through collateral information was used for coding.

Lastly, the referral packages used by the program have developed over time to provide more comprehensive information. At inception, the program used a program-specific referral package. To provide more standardized information, the program began using the Ministry of Children and Family Development Residential Attendance Program (RAP) referral package (see Appendix 3) in addition to the program package. Therefore, referral information available from youth referred in the program's infancy will lack some of the detail of later referrals.

For the treatment condition, information was obtained from referral, intake and program information, providing a more comprehensive depiction of the client. Referral information received from the probation officer was used in collaboration with the information provided by the youth at intake (e.g., substance use patterns, suicidal ideation, self-harming behaviours, etc.) and program outcome reports.

In conducting follow-up, a point in time was identified for each case after which convictions were viewed as recidivism. For the non-treatment group, the date used for analysis was the referral date. That is, the number of days between the referral and convictions in the various offence categories (i.e., property, personal, drug, administrative or other) was calculated. For the treatment group, the date used for analysis was the treatment end date. That is, the number of days between the youth being discharged from the program (either due to program completion or AWOL, self-discharge or involuntary discharge)

and convictions in the various offence categories was calculated. In both the treatment and non-treatment condition, for youth who did not have a conviction, the date of the follow-up (May 31, 2006) was used in the calculation.

In addition to measuring the elapsed days to reoffending in various offence categories, the number of convictions for each offence category was also recorded for each group. Therefore, recidivism is measured both by the elapsed time before recidivism and the total number of convictions for each offence category. There are challenges in accurately determining the number of days before returning to criminal activity. As mentioned, a starting point needs to be determined, after which convictions are coded as recidivism. The starting point for the non-treatment group is the referral date. This may be problematic in making comparisons as the time elapsed between referral and treatment discharge may impact treatment outcomes, confusing the impact from the program intervention itself. A standard amount of time could have been added to the referral dates to minimize the effect of time alone influencing treatment outcomes. However, a meaningful amount of time could not be determined; adding an arbitrary amount of time to each referral date did not have value for this analysis.

In both the treatment and non-treatment conditions, the elapsed time without reoffending does not differentiate days where reoffending was possible. Youth may have spent time in closed environments (e.g., in custody, in other treatment programs, etc) where the likelihood of reoffending was minimized or

may have spent time outside of British Columbia where new provincial charges would not show on Cornet. In effect, it would not be the intervention under examination leading to more positive outcomes (i.e., less recidivism), but the fact that the youth was unable to reoffend. Although it would be advantageous to eliminate the days where the youth was unable to reoffend from the calculation of elapsed time without reoffending, it would be extremely difficult to obtain this information. Due to the transient and unstable nature of the youth under examination, it would be very difficult to ascertain where the youth resided over a period of time. Ministry of Children and Family Development files might have a small percentage of this information, but the location of youth during prolonged AWOLs would be unknown. The youth themselves would likely be unable to provide a clear picture of when they were living in different environments (e.g., in custody, in programs, AWOL, etc.). These youth tend to access a high number of resources and may stay for very short periods of time. In addition, the youth's memories of where they were living at various points deteriorate due to time and substance use.

Attempting to determine the number of days where reoffending was possible is an inexact science at best. Also, as the treatment and non-treatment conditions do not differ significantly, it could be assumed that both conditions would have youth who were in closed or closely supervised environments at some points. Although it is not possible to ascertain, there is no reason to suppose that the youth in the two conditions differ significantly in terms of time spent in closed environments.

Follow-up was conducted using information received from the Cornet system; dates for convictions in each of the offence categories were coded separately. Convictions were used instead of arrest or charge information. Arrest information is not available through Cornet and would be difficult and time consuming to obtain through various provincial police forces. Charge information is available on Cornet, however, in some cases charges are dropped, youth are found not guilty or the youth may be convicted of a lesser offence. To avoid including these false positives in analysis, conviction dates were used. However, conviction dates are problematic because of the delay between a criminal infraction and a conviction resulting. In some cases, the conviction will be coded as recidivism when the criminal infraction likely occurred *prior* to the date used as the starting point for calculating elapsed time to new conviction. This is evident in the survival data, as some youth show convictions immediately after completing treatment. This will be explained further in examining the results of the current study.

5.4 Procedures

The data were analyzed using the Statistical Package for Social Sciences, version 14. Life tables survival analysis was conducted on the elapsed days to recidivism in each offence category; property, personal, administration, drug and other. Comparisons were made between the treatment and non-treatment groups, as well as with those who completed the program and those who did not. As well, Independent Sample t-tests were conducted to compare the mean number of convictions accrued by the treatment and non-treatment groups for

each offence category. Analysis was conducted on several variables of interest to determine if certain variables were correlated with treatment completion or treatment outcomes. Relationships between risk and need variables (e.g., family functioning, mental health concerns, school performance, etc.) and length of time in treatment were analyzed to determine the impact of specific variables on treatment engagement and retention.

5.5 Participants

The adjudicated female youth under examination were referred to, or referred to and admitted to, a provincial residential treatment program between June 15, 2000 and March 31, 2005. One adjudicated youth was removed from the analysis as file information was not available. The 142 youth used in analysis demonstrated the following characteristics[3]:

The female youth under examination were primarily Caucasian (45.7%) or First Nations (41.3%); the remaining youth were Asian (2.2%) or of mixed race (n=92). Most youth first became involved in the criminal justice system between 13 and 15 years of age (63.6%) (n=129); the most common referring offences were administrative in nature (44.4%) (n=133). Youth referred to the program were most often living with family (37.9%) or an "other" living arrangement (35%), which includes foster placements, groups homes, safe houses and shelters (n=140). Generally, the youth under examination lived in a single parent dwelling (35%), with their natural parents (14.6%) or were in the care of the Ministry of

[3] Missing data was excluded from analysis.

Children and Family Development (35.8%) (n=137). The remaining youth had been adopted, lived in blended families or in other living arrangements (e.g., living with grandparents, aunts, uncles, etc.).

Of those referrals where information was included, 53.7% of the youth had been neglected by their parents/caregivers (n=108), while 82.7% had suffered physical abuse (n=52) and 36.5% had suffered sexual abuse (n=96). Where responses were given, the majority of youth had parents or family members with substance abuse issues (93.2%, n=59) and had experienced youth/parent communication problems (90.1%, n=111).

The majority of female youth examined had a history of running away, of being physically aggressive and of being verbally abusive. Of those referrals where the information was provided (n=131), 47.3% of the girls had a history of suicidal ideation or attempts. The most common mental health concern noted was depression, followed closely by a diagnosis of Attention Deficit Disorder, with or without Hyperactivity.

In terms of substance use history, the vast majority of youth under examination were polydrug users. The most identified drugs of choice were, in order of frequency, marijuana, cocaine, crystal meth, heroin and alcohol. The case percentages demonstrate that over 74% of the youth examined identified marijuana as one of their drugs of choice, 53.8% identified cocaine, 46.2% identified crystal methamphetamine and alcohol and heroin were both identified by 33% of the youth as being one of their drugs of choice. The drug of choice

and motivation variables had multiple possible responses; thus, have totals over 100%. Most youth began using substances between the ages of 11 and 14 years, with the most common response being 14 years old. The majority of youth referred were identified as being precontemplative or contemplative with respect to their substance use. Most youth had been connected with outpatient addiction services but did not attend regularly because they were actively using. Additional frequency information on all variables under analysis is included in Appendix 4.

CHAPTER 6: ANALYSIS AND DISCUSSION

Survival analysis was conducted for each offence category to determine if program involvement reduced recidivism. Survival analysis is specific and accurate as it allows for a conviction date to be analyzed rather than analyzing convictions in each offence category at specified points post-treatment. Comparisons were made between the treatment and non-treatment group; additional analysis examined the impact of program completion on elapsed time to new conviction.

Recidivism was somewhat reduced for those admitted (i.e., the treatment condition) for both property offences (p=.060) and personal offences (p=.068) (see Figure 6.1 and 6.2). In addition, youth admitted to the program showed significantly reduced involvement in "other" offences (e.g., solicitation) (α=.05, p=.015).

A significant reduction was also noted in administration offences for those youth who completed the program (α=.05, p=.012). For all other offence categories, there was no reduction in recidivism associated with program completion. It is likely the reduction demonstrated in administration offences for youth who complete the program is related to youth being "breached" for non-completion. As the youth are adjudicated, failure to complete the program could result in an additional administrative offence. Therefore, the distinction between

the groups is not caused by the intervention under examination; instead, the consequence of non-completion is increased likelihood of further administrative charges.

To assess program impact, both the elapsed time to new convictions and the number of new convictions in each offence category was recorded. Independent Sample t-tests revealed that youth admitted to the program had significantly fewer administrative (p=.009), drug (p=.026) and other (p=.009) offences, on average, than the non-treatment group. As hypothesized, the number of personal offences, on average, was also reduced for the treatment group (p=.057). Independent Sample t-tests were also conducted to compare the average number of offences (for each offence category) for those who completed the program to those who did not. Congruent with the survival analysis, those who completed the program had significantly fewer administrative offences on average (p=.030). Again, this is likely caused by non-completion resulting in administrative charges. There were no statistical differences noted in any of the other offence categories.

Figure 6.1 - Survival Chart of Property Offences

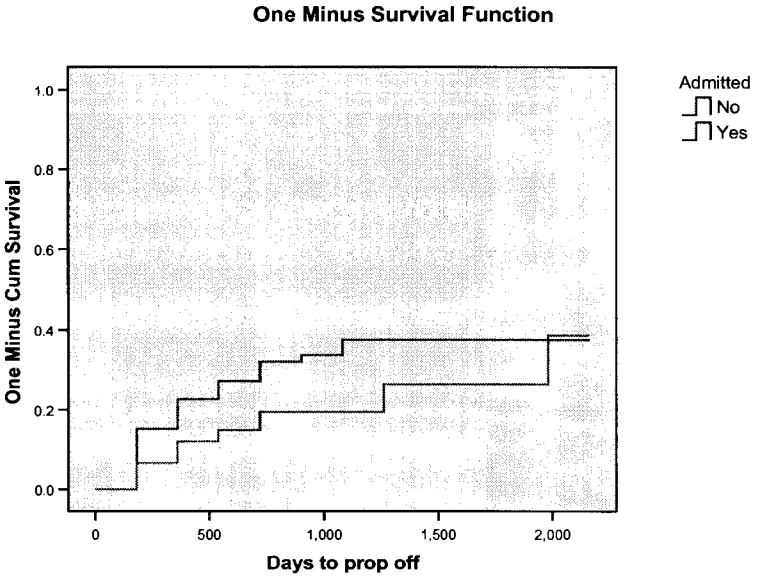
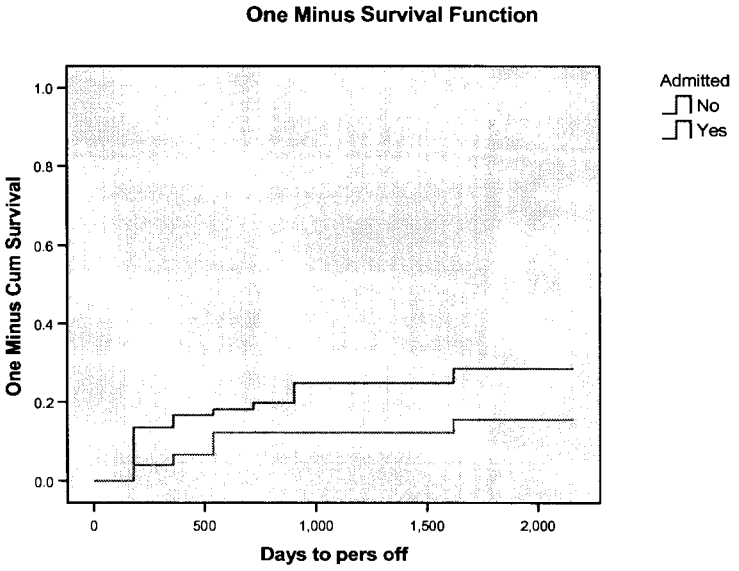


Figure 6.2 - Survival Chart of Personal Offences



Chi square analyses were conducted to determine relationships between specific variables and treatment engagement and retention. A frequency distribution of the days in treatment demonstrated that participants were heavily weighted at the two ends of the scale; meaning, for the most part, youth were either minimally engaged and left treatment early or were effectively engaged and remained until program completion. Of the 76 youth admitted, one case was removed as the youth was in the program for an exceptionally long period of time (212 days) and skewed the frequency distribution. Of the 75 youth analyzed, 28 youth remained in treatment for less than two months (i.e., the unengaged group) while 27 youth remained in treatment for between five and six months (i.e., the engaged group). The characteristics of these two groups were compared to determine the variables upon which the participants differed. The variables hypothesized to relate to treatment engagement (i.e., mental health, family functioning, school performance, etc.) did not yield excepted results. Independent sample t-tests were conducted to see if the presence of risk factors impacted the mean amount of time spent in treatment but no significant results were yielded. Drug use was also examined; there were no significant differences in the drugs of choice identified by the engaged and non-engaged groups. Part of this could be due to the use of file data and the problems that result from the availability of information, difficulties in interpretation and missing data. The unengaged group and the engaged group did not differ significantly on any of the analyzed variables.

6.1 Discussion

The analysis supports that the program is an effective intervention for reducing recidivism for specific offence categories. Of note, the impact of program attendance on recidivism was more pronounced in analyzing admittance, rather than program completion, as a first-order control variable. This is contrary to the first hypothesis which reads:

1. Adjudicated youth who complete the intensive residential addiction treatment program will demonstrate less recidivism than those who did not complete the program and those who were not admitted to the program.

Contrary to the above hypothesis, program impact was most evident in comparing the treatment and non-treatment conditions. Youth who were admitted into the program demonstrated reduced recidivism; personal and property offence convictions were somewhat reduced and other offences were significantly reduced. The average number of convictions post-treatment was also significantly less for youth admitted to the program (for administrative, drug and other offences). The average number of personal offences was fewer for the treatment group, although the difference was not significant.

43% of the adjudicated youth admitted successfully completed the program. Little difference was noted between those who completed the program and those who did not, in terms of elapsed time to future convictions and number of new convictions post-treatment. The one exception is significant differences in

administrative offences for non-completers. The time to new conviction for administrative offences is less and the number of administrative offences post-treatment is more for non-completers. As mentioned, this is likely the result of new administrative charges being laid for program non-completion.

It is of interest that being admitted to the program had positive impacts on recidivism for the female youth. On average, admitted youth spent 99.81 days in the program, although the number of days ranged from 1 to 183 (n=75).

2. Youth with multiple problems (including a history of abuse and/or neglect, parental substance use, mental health concerns, poor school performance) will show more difficulties with retention and engagement in the program.

The data available in this study did not support the above hypothesis. This could be a result of incomplete, inaccurate or missing file information. The variables used were coded as a dichotomous variable, indicating the presence or absence of certain risk factors. Perhaps if information was available on the severity of risk factors, the data would have supported existing research on multi-problem youth.

Being admitted into the program has a demonstrated effect on later recidivism and number of convictions post-treatment. On average, youth who are admitted to the program stay for approximately 100 days. It is recognized that positive outcomes are linked with appropriate lengths of treatment. NIDA (1999) states that in residential settings, "participation for less than 90 days is of

limited or no effectiveness, and treatments lasting significantly longer often are indicated" (p. 16). In addiction literature, 90 days is often seen as the minimum duration for effective treatment. In this case, the youth in the program under examination benefited from their stay (in terms of recidivism), even if they did not complete the program. If additional outcome measures were used (e.g., relapse, family functioning, school performance, etc.), positive outcomes may be linked with program completion.

As mentioned, the treatment and non-treatment groups did not differ significantly on any of the variables measured (see Appendix 5). However, there are some unknown factors which may impact the findings of this thesis. First, while they did not attend the program under examination, it is highly likely that many of the non-treatment group did attend treatment services. These youth were expected to engage in treatment services as part of their sentence. It is unknown whether these youth did meet the conditions of their community supervision and if so, to what extent they utilized treatment services. That is, the level of participation in treatment services would vary. Some youth may be involved in minimal services (e.g., meeting with an outpatient counsellor sporadically) while others may be involved in more intensive services (e.g., long-term residential treatment). Information on whether addiction services were accessed is not available.

Another potential issue that would impact these findings is the non-treatment group may have been composed of more high-risk youth. Many of the

youth in the non-treatment group did not attend because they were in custody or AWOL. This may demonstrate that these youth are increasingly transient, more difficult to locate and unlikely to be admitted into treatment services. However, many of the non-treatment group stabilized within the community and no longer required residential treatment, demonstrating that perhaps their risk was not as substantial as the treatment group. The impact of these potential differences between the treatment and non-treatment group is unknown, and may serve to strengthen or weaken the current findings.

There are many reasons why a more significant impact was not indicated by program completion. In some cases, the youth who attended the treatment program may demonstrate significant progress while in the highly structured and highly supportive environment. However, these youth return to their homes and communities to find little has changed. The youth are presented with the same high-risk people, places and things and are often returning to an unstable or dysfunctional home environment. The youth are referred to post-treatment services and supports in their home community, however, resources are limited and there is often a long waiting list for addictions, trauma or family counselling. In many cases, youth are returning to remote rural areas where very few services are available. To compound the problem, many of the youth under examination had parents or family members with substance misuse issues. To have a youth in early recovery return to a household where substance use is normative and substances are readily available is setting them up for disaster. Youth may work

on family relationships while in treatment, but often the work done within those six short months simply scratches the surface in terms of family dysfunction.

As mentioned, the prosocial skills and adaptive techniques learned in treatment may not be effective in the social situation to which the youth return. Providing youth with the option of second-stage housing could help eliminate some of the issues of reintegration. In discussion with my colleagues, there is recognition that a service gap exists for youth leaving intensive treatment. The program under examination is extremely structured and involves 24-hour supervision. Some of the youth will be discharged from this program into an independent living situation with very minimal support and virtually no supervision. Many of these youth are very young (e.g., 15 or 16 years old), living on their own for the first time and tend to lack the life skills necessary to be successful. Having second-stage housing options available allows for increasingly less supervision as youth demonstrate their capabilities in the community, while still providing support as needed. The youth are able to attend school or work and learn independent living skills, while continuing their recovery. Second-stage housing is not an additional treatment component, but assists the youth in a more gradual reintegration into their home community. These options for youth are very limited; from a practitioner's perspective, more second-stage housing options are desperately needed to improve long-term treatment outcomes.

Further research on existing provincial programs should be conducted to determine effectiveness. Youth self-reports in various life areas post-treatment demonstrate positive treatment outcomes, although these are limited to the youth's perspective. Perhaps further research could use these self-reports in an analysis with collaborating sources (including parent/guardian and probation officer reports) to determine if improvements were noted. Further research needs to determine an accurate means of measuring the individual gains made in treatment, while still being able to compare across individuals and groups.

In addition, research should be conducted to determine if the findings of this thesis could be generalized to male youth. As noted, male youth with addiction issues and criminal justice involvement tend to have more externalizing issues than female youth. The program under examination attempts to address the internalized issues of the female clients, to help reduce further criminal involvement and substance use. As such, the program is a therapeutic alternative to a setting where only externalized behaviours are addressed. Male youth may benefit from a similarly structured program that emphasizes skill and competency development, along with counselling and family work, but may require a different level of supervision and support. Although the correlates of criminal involvement and substance use would be the same for males and females and similar therapeutic interventions may be appropriate, the outward behaviour expressions of males may need to be more intensely addressed before moving to the underlying issues.

6.2 Recommendations

Further study is needed in determining the most accurate form of program evaluation. "Success" is a difficult term to define in addiction research (see Brown, 2004 for complete analysis of the developmental factors influencing treatment outcomes). In a program where individualized service delivery is utilized and goals for treatment differ, success becomes even more elusive. Comprehensive statistics on youth serviced are kept by the program under examination and used to report on outcome measures. However, information for comparison groups is not readily available. Additional research on various outcome measures is required to determine the long-term impact of program completion on substance use relapse, academic/vocational functioning, social relationships and family functioning.

Additional research is also required to differentiate those highly engaged in the treatment process from those who were not engaged and withdrew within the first two months. Having more detailed and accurate information on the social history of the youth is necessary to make these differentiations. Secondary analysis could involve content analysis of the files of the engaged and non-engaged groups to determine variables that are influencing retention.

As program attendance supported more positive outcomes in terms of recidivism, alternative to custody programs are appropriate and effective for high-risk, high-need female offenders. These programs should be increasingly available to provide youth the opportunity to address internalizing issues that

correlate with substance use and criminal activity. Currently, there are waitlists for all four provincial resources; two of these resources are specialized, one for male youth and one for aboriginal youth, further limiting availability. Under the YCJA, with its well-articulated sentencing objectives, many youth receive orders of community supervision with conditions that focus on addressing their problematic substance use. However, although these youth are eligible to attend, their wait for admittance to a treatment program would likely be approximately six months (on average). During this time, the youth will continue to be at risk due to their problematic use, will likely violate the conditions of their order for community supervision and may be placed in custody. The court recognizes the youth needs to address their substance use yet the services necessary are not readily available. The youth then demonstrates poor community behaviour because their underlying needs are not being met and risks establishing themselves as not responding well to community supervision and thus, requiring a custodial sentence.

In terms of gaps in service, youth need to be able to access the supports and services they require in their home communities post-treatment. This should include the option of second-stage housing for youth who do not have a positive home environment to which they can return. Youth require ongoing support to successfully reintegrate from a highly structured and highly supervised environment.

Policy makers need to recognize that problematic substance use and its correlates are serious issues for youth and ensure that adequate funding is provided to addiction services for youth. This should include prevention, treatment and after-care services. Investing time and energy into today's youth is of paramount importance in building a strong community in the future.

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APPENDICES

Appendix 1: Program Information and Curriculum

The Program has three major components; 1) Pre-Treatment Detox / Stabilization; 2) Core Treatment; and 3) Reintegration. Participants are assessed at each phase of the treatment program to ensure treatment is tailored to meet specific individual needs. Upon admission, an assessment is conducted to determine whether pre-treatment detox/stabilization is necessary prior to starting the core treatment component. Assessment is also conducted upon completion of detox/stabilization, and upon the completion of each core component. At the completion of the core treatment, an assessment is completed to determine the need for post-treatment reintegration services.

PRE-TREATMENT DETOX/STABILIZATION

In order to stabilize youth and assess their need to withdraw from substances, all youth are assessed by a physician upon intake and enter the Pre-treatment Detox / Stabilization phase of the program.

During this phase, the participant will be involved in;

- withdrawal management
- pre-treatment stabilization
- relationship building activities (including appropriate recreational and social activities)

Youth who have been assessed as needing additional services be referred to the appropriate service. The length of pre-treatment stabilization will vary depending upon the needs of the client. If you are unable to participate in programming activities, they will have a modified program to suit their needs during stabilization.

CORE TREATMENT

During the Core Treatment Phase of the program, participants will be involved in:

a) Core Treatment Program Sessions
b) Individual and Group Counseling
c) Family Counselling
d) Teacher Supervised Education
e) Recreational and Social Activities

a. Core Treatment Program Sessions

The Core Treatment Program Sessions are designed to provide participants with knowledge, skills, and resources that will enable them to build healthier lifestyles. These sessions will be held at various times throughout the week and will include information, discussion, and activities. Activities may take place in the centre or in the community. Participants can join the core treatment program at anytime, as knowledge of previous sessions is not required for comprehension of subsequent sessions. Regardless of when the participant enters the program, she will have access to all the core treatment sessions. Progress in the core treatment sessions will be recorded for each youth

Theme Binders

A theme binder exists for each weekly topic. The theme binder includes the songs to be played at check-in and check-out, the word and quote of the day, and the educational group exercises and activities. The binder also includes all of the information and exercises that can be found in the youth workbooks. In addition, each theme binder contains a package for the family caregivers outlining the educational objectives of the week and suggesting ways to adapt the theme into practical activities at home. The theme binder also contains recreational and community activities that relate to the educational component.

Youth Workbooks

Each participant will be given a theme workbook at the beginning of each week. This workbook includes all the material and exercises that will be covered throughout the week. Once completed, the workbook is handed in to the primary worker to ensure work is sufficient and to open avenues for discussion on the theme of the week. The primary worker records completed workbooks on the Core Treatment Progress Chart (see attached: Core Treatment Progress Chart). Completed workbooks are returned to the youth for use as a resource.

Family Caregiver Package

Each family caregiver has also been given an overview of the topics that are covered during the weekly education sessions. This overview includes suggestions for conversations and activities that can be done with the youth to assist them in processing the information they have learned throughout the week and to make connections between their decisions and subsequent outcomes.

Theme Components

The general themes are as follows:

Connections

The Connections component focuses on developing skills required to improve interpersonal relationships and increase positive social supports. Topics covered include:

- Basic Communication Skills – non-verbal communication; active listening; providing and accepting feedback; assertive, aggressive and passive communication styles.

- Relationships (Part One) - peer pressure; evaluating current relationships; building new friendships; deconstructing stereotypes and unlearning prejudices; family roles and the impact of substance use.

- Relationships (Part Two) - romantic relationships; values and expectations; evaluating qualities desired in a partner; setting boundaries; symptoms of unhealthy relationships (threats, control, power differentials and abuse); recognizing abuse and getting help.

- Support Networks - developing healthy support networks; accessing community resources; recognizing potential barriers to support.

- Conflict Resolution - harassment and intimidation; developing empathy; victimization and bullying; productive and non-productive conflict resolution techniques.

Health

The Health component focuses on improving physical and mental health with an emphasis on prevention and harm reduction. Topics covered include:

- The Benefits of a Healthy Lifestyle - nutrition and the basic food groups; developing exercise routines; emotional eating; effects of eating disorders and unhealthy methods of weight control.

- Reproductive Health - male and female reproductive systems; contraceptive options; STD/HIV prevention; Pap tests and breast self-examination.

- Mental Health – reduce stigma around mental illness; recognizing and preventing depression; the role of substance abuse in depression; dealing with loss and grief; suicide prevention.

- Effects of Substance Abuse - myths and facts regarding substance abuse; stages of using and stages of change; harm reduction measures.

Self-Esteem

During the Self-Esteem component, treatment sessions will focus on participants developing self-awareness and learning to think about themselves in positive ways. Topics include:

- Self-Awareness - self-exploration; investigate personal values, strengths and self-concept; self-esteem and substance abuse; the positive effects of being self-aware.

- Negative Self-Talk – self-talk and self-esteem; interconnectedness of behaviour, thought and emotion; ways to combat negative thinking patterns; gratitude, positive self-talk and affirmations.

- Gender Roles - the source and validity of gender roles stereotypes and societal standards of beauty; enhancing body image through acceptance; the destructive aspects of the sex trade and how to avoid being coerced into the sex trade.

- Enhancing Self-Esteem - recognizing and appreciating strengths and accomplishments.

Self-Care

The Self-Care component focuses on strategies to reduce stress and enhance the participants' lives. Topics covered include:

- Stress Management - identifying stress triggers, reactions, and coping mechanisms; relaxation techniques; thought-stopping.

- Anger Management - the functions of anger; identifying anger triggers; justified anger; anger arousal cycle; positive ways of dealing with anger; conflict resolution.

- Decision Making - making planned decisions; helpful and harmful decision making techniques; decisional balance grid; re-evaluating past substance use decisions;identifying triggers for drug use and developing coping strategies; coordinating and implementing a youth meeting.

- Life Skills – increase independent living skills; obtaining housing, creating monthly and start-up budgets; increase job awareness skills (looking for work, resume writing, cover letters, interviewing skills).

Relapse Prevention

Clients begin to work on relapse prevention the moment they enter treatment and are given a Relapse Prevention Workbook to complete.

Addiction Awareness

This psychosocial educational group is done on a weekly basis and provides factual information to clients regarding the effects of drugs. Each week a different drug or addiction concept is covered. The goal of this group is to provide clients with information on the risks attached to drug use through exercises and discussions. Youth may begin the Addiction Awareness group at any time as knowledge of previous sessions is not necessary for subsequent sessions.

Music Therapy

Throughout the course of the program, group therapy may also be offered by a music therapist who is contracted to provide services. The goal of the music therapy is to provide clients with an opportunity to express themselves in a less traditional way and to provide them with an outlet for their creativity.

AA/NA Meetings

Each youth will be required to attend a 12-step group twice per week. 12-step groups are typically Alcoholics Anonymous (AA) or Narcotics Anonymous (NA). Community based meetings allow the youth to meet other individuals who are further along in their recovery process and to hear other individuals' experiences. Accessing AA and NA while in treatment also gives the youth an opportunity to explore possible supports for when they have completed treatment.

Reward Board

Youth are given recognition each day for positive behaviour and compliance with the program expectations. Recognition is given verbally as well as formally through a reward system.

Goal Setting

Each week youth set personal goals for themselves. Youths' goals should reflect an aspect of their treatment that they are struggling with, or something that they need to accomplish. Staff should ensure that the goals are specific, measurable, attainable, realistic and treatment/recovery orientated (S.M.A.R.T.).

Graduations

Graduation occurs when a youth has completed the program. A graduation is meant to celebrate the youth's accomplishment while remaining realistic and honest about what obstacles the youth may continue to face. Family members and members of the youth's support team (i.e., professionals) will be invited to the graduation.

b. Individual and Group Counseling

Each participant is provided access to both individual and group counseling on a weekly basis. Individual counseling sessions focus on issues related to the core training sessions, as well as issues that are personally relevant for the participant. The Counselor and the youth work collaboratively to develop individualized goal-directed service plans for the youth. The program compliments the Stages of Change Model (Prochaska & DiClemente, 1983). The program is comprehensive in that it is developmentally appropriate, research-based, culturally sensitive, and holistic.

Group counseling sessions focus on personal issues raised by the theme component sessions and issues relevant to the functioning of the group. Some group sessions may focus strictly on team building while others will relate directly to the theme of the week.

c. Family Counselling

Counselling is offered to all participants and families for the purposes of improving the participant's relationship with their families of origin. Siblings and other family members who play a significant role in the participant's lives will also be welcome and encouraged to participate in these sessions. Sessions will focus on issues raised by the core training sessions, as well as those raised by the participants.

d. Teacher Supervised Education

Participants receive teacher-supervised education for three hours a day in the morning, four days a week. During school instruction time, clients are able to choose from a wide variety of courses.

The teacher will complete an initial assessment, design a school plan for each student and complete a student progress report that outlines the youth's progress in the school program.

e. Recreational and Social Activities

Each day of programming includes recreational and/or social activities. These activities are designed to provide opportunities for involvement in community, social, athletic, and recreational programs, as well as an opportunity to build on the skills learned in the core treatment sessions. Participant input regarding activities is encouraged so that each youth has the opportunity to pursue activities that reflect her own interests.

All participants will determine their recreational and social activities based on their individual needs and abilities. Youth will have the opportunity to design their own recreational program to be carried out during community outings. Where possible, youth will be assisted in becoming involved in existing community programs that reflect their interests. Such programs may include opportunities for youth to pursue personal, ethnic or cultural interests as well as social, athletic or recreational pursuits. Staff interests will not direct the youth's activities.

All of the recreational activities are designed to encourage participants to explore new possibilities and to improve their connection and comfort level with their community.

In order to further enhance the educational component, each theme will be supported by various recreational and community activities.

Connections
The Connections component focuses on developing skills required to improve interpersonal relationships and increase positive social supports.

Throughout this component participants will be engaged in team building activities to support the development of peer relationships. Team sports, such as basketball, tennis and volleyball will be taught and played. As well, participants will have the opportunity to visit many different community organizations so they gain a sense of available community resources. The organizations that will be visited are various recreational centres, youth centres, health clinics and support services. In addition, youth will learn how to use library resources to locate applicable community resources and organizations.

Health
The Health component focuses on improving physical and mental health with an emphasis on prevention and harm reduction.

This component will include an array of fitness classes, swimming, skating and outdoor hikes. The participants will learn how to exercise safely and about the range of physical activities that are available to them. Participants will also learn through weekly walks that there are many inexpensive ways to exercise.

Self-Esteem
During the Self-Esteem component, treatment sessions will focus on participants developing self-awareness and learning to think about themselves in positive ways.

The Self-Esteem component will be enhanced through art and dance classes and activities that have not yet been done by participants. Participants will have the opportunity to try new modes of expression and to realize their potential in unexplored areas. Some of these classes include, drawing, henna body art, candle making, swing dancing and working with clay.

Self-Care
The Self-Care component focuses on strategies to reduce stress and enhance the participant's lives.

Participants will attend yoga classes as well as aerobic classes that focus on diminishing stress. As part of the Life Skills week, participants will visit the library to learn basic Internet and computer skills. Participants will also learn basic first aid to enhance their employability.

REINTEGRATION

This phase of the treatment program includes any aspect of the Core Treatment Program that is relevant to the participant's needs. Throughout the reintegration phase, staff will assist the youth in researching employment, housing, and educational options and linking the youth with appropriate post-discharge community resources. All youth will leave the reintegration phase with a relapse prevention plan.

Appendix 2: Coding Table

The Impact of Adjudicated Residential Treatment on Recidivism in Female Youth
(Ethics Reference #36907)

Demographics

1. Date of Birth (YEAR) (99=NI) __ __
   (MONTH) (99=NI) __ __
   (DAY) (99=NI) __ __
2. Racial Origin
   1= Caucasian
   2= Native
   3= Asian
   4= Other _____
   9= Not Indicated

Criminal History

1. YCRNA
   1= Low
   2= Medium
   3= High
   9= Not indicated

2. Age of First Offence
   1= < 13 years
   2= 13-15 years
   3= 16-18 years
   9= Not indicated

3. Referring Offence
   1= Property
   2= Personal
   3= Administrative
   4= Drug
   5= Other _____
   9= Not Indicated

Family History

1. Living Arrangement at time of referral
   1= Family

2= Independent
3= Friends
4= On street/NFA
5= Custody
6= Treatment service (e.g., detox)
7= Other _____
9= Not Indicated

2. Type of Family
   1= In care of MCFD
   2= Natural Parents
   3= Adopted
   4= Blended
   5= Single Parent
   9= Not indicated

3. Family willing to participate in treatment
   0= No
   1= Yes
   9= Not indicated

4. History of Neglect in Caregiving Family
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

5. History of Physical Abuse in Caregiving Family
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

6. History of Sexual Abuse in Caregiving Family
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

7. History of Substance Use in Caregiving Family
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

8. History of Communication Problems between youth and caregiver(s)
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

9. Caregiver(s) overly protective of youth
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

10. Caregiver(s) use excessive discipline
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

11. Caregiver(s) cover for youth
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

12. Caregiver(s) have permissive parenting style
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

13. Youth has problems with step-parent
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

14. Caregiver(s) use inconsistent discipline
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

15. History of physical fights between caregiver and youth
   0= No
   1= Yes
   2= Unknown

9 = Not indicated

Educational History

1. Enrolled in school at time of referral
   0= No
   1= Yes
   2= Unknown
   9= Not indicated

2. Last grade completed (99= NI) __ __

Problem Behaviours and Mental Health Concerns

1. History of Running Away
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

2. History of Prostitution
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

3. History of Eating Disorders
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

4. History of Suicidal Ideation/Attempt
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

5. History of Self-mutilation/harm
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

6. History of Physical Aggression
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

7. History of Verbal Abusiveness
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

8. History of Fire Starting
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

9. History of Sexually Inappropriate Behaviour
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

10. Attention Deficit Disorder (w/ or w/out hyperactivity)
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

11. Reactive Attachment Disorder
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

12. Fetal Alcohol Syndrome or Effect
   0= No
   1= Yes
   2= Unknown
   9 = Not indicated

13. Obsessive Compulsive Disorder
   0= No
   1= Yes
   2= Unknown

9 = Not indicated

14. Oppositional Defiant Disorder
    0= No
    1= Yes
    2= Unknown
    9 = Not indicated

15. Depression
    0= No
    1= Yes
    2= Unknown
    9 = Not indicated

16. Mood Disorder
    0= No
    1= Yes
    2= Unknown
    9 = Not indicated

17. Anxiety Disorder
    0= No
    1= Yes
    2= Unknown
    9 = Not indicated

18. Psychosis
    0= No
    1= Yes
    2= Unknown
    9 = Not indicated

19. Other Mental Health concerns not listed above _____

20. On medication for emotional/mental issues
    0= No
    1= Yes
    2= Unknown
    9 = Not indicated

History of Substance Use

1. Polydrug Use
    0= No
    1= Yes
    9 = Not indicated

2. Drug of Choice
    1= Marijuana
    2= Alcohol
    3= Cocaine
    4= Heroin
    5= Inhalants
    6= LSD
    7= Mushrooms
    8= PCP
    9= Crystal Meth
    10= Ecstasy
    11= Methadone
    12= Other _____
    99= Not Indicated

3. Age of onset for DOC (99= NI) __ __

4. Level of motivation in relation to DOC
    1= Precontemplative
    2= Contemplative
    3= Determined
    4= Action
    5= Maintenance
    9= Not Indicated

<u>History of Involvement with Addiction Services</u>

1. Accessed detox services
    0= No
    1= Yes
    9= Not Indicated

    If yes, completed detox
        0= No
        1= Yes
        9= Not Indicated

        If detox not completed, reason
            1= Relapse/AWOL
            2= Other _____
            9= NI
2. Accessed outpatient counselling services
    0= No
    1= Yes
    9= Not Indicated

If yes, attends regularly
0= No
1= Yes
9= Not Indicated

If not attending, reason
1= Actively using
2= Other _____
9= NI

3. Accessed psychiatric or forensic services (outpatient or inpatient)
0= No
1= Yes
9= Not Indicated

If yes, completed
0= No
1= Yes
9= Not Indicated

If not completed, reason
1= Relapse/AWOL
2= Discharged for behaviour
3= Other _____
9= NI

4. Accessed other residential addiction services
0= No
1= Yes
9= Not Indicated

If yes, completed residential treatment
0= No
1= Yes
9= Not Indicated

If not completed, reason
1= Relapse/AWOL
2= Discharged for behaviour
3= Other _____
9= NI

Treatment Involvement

1. Admitted to treatment
   0=No
   1=Yes

2. Start date in RAP (YEAR) (99= NI) __ __
   (MONTH) (99= NI) __ __
   (DAY) (99= NI) __ __

3. End date in RAP (YEAR) (99= NI) __ __
   (MONTH) (99= NI) __ __
   (DAY) (99= NI) __ __

4. Program Completed
   0= No
   1= Yes
   If no, reason for discharge
      1= voluntary (arranged with collaterals)
      2= involuntary (due to behaviour/non-compliance)
      3= AWOL
      4= Other _____

5. AWOL Reports on file
   0= No
   1= Yes

6. Incident Reports on file
   0= No
   1= Yes

Discharge Plan

1. Return to school
   0= No
   1= Yes
   9= NI

2. Attend addictions counselling/additional treatment services
   0= No
   1= Yes
   9= NI

3. Return to live with family/caregivers
   0= No
   1= Yes

9= NI

4. Live independently
   0= No
   1= Yes
   9= NI

5. Live in group home
   0= No
   1= Yes
   9= NI

6. Work full- or part-time
   0= No
   1= Yes
   9= NI

Recidivism

1. Accrue new conviction for property offence

(YEAR)	(99= NI)	__ __
(MONTH)	(99= NI)	__ __
(DAY)	(99= NI)	__ __

1b. Number of new convictions for property offences __ __

2. Accrue new charge for personal offence

(YEAR)	(99= NI)	__ __
(MONTH)	(99= NI)	__ __
(DAY)	(99= NI)	__ __

2b. Number of new convictions for personal offences __ __

3. Accrue new charge for administrative offence

(YEAR)	(99= NI)	__ __
(MONTH)	(99= NI)	__ __
(DAY)	(99= NI)	__ __

3b. Number of new convictions for administrative offences __ __

4. Accrue new charge for drug offence

(YEAR)	(99= NI)	__ __
(MONTH)	(99= NI)	__ __
(DAY)	(99= NI)	__ __

4b. Number of new convictions for drug offences __ __

5. Accrue new charge for other offence

Charge _____

(YEAR)	(99= NI)	__ __
(MONTH)	(99= NI)	__ __
(DAY)	(99= NI)	__ __

5b. Number of new convictions for other offences __ __

Appendix 3: Residential Attendance Program Referral Form

COMMUNITY YOUTH JUSTICE
RESIDENTIAL ATTENDANCE PROGRAM REFERRAL

Liaison P.O.:_____ Date Received:_____
Approved___Not Approved____
Comments:_____

This referral is being directed to:

_____
Name of Program

Youth's Name:_____Ph#_____
Address:_____ _____
Street City Postal Code
Family Doctor:_____

D.O.B.:_____/ _____/ _____ Age:_____
Month Day Year

BC Medical #:_____

Status #:_____
(if applicable)

Dentist:_____

☐ Male ☐ Female
☐ Native ☐ Non-Native ☐ Other Ethnic Origin_____

Characteristics: Height:_____ Weight:_____ Hair:_____
Eyes:_____ Build:_____

Parent/Guardian:_____Ph#_____
Address:_____ _____
Street City Postal Code

Social Worker:_____Ph#_____
(if applicable)

Is the youth in care as defined by the *Child, Family and Community Services Act?*
☐ No ☐ Yes

Specify_____

Who is the emergency contact person?

_____ _____ _____
Name Phone number Relationship

Referring P.O:_____
Office:_____
Ph#: _____ Fx#: _____
Referral Date:_____

Youth's Behaviour

Does the youth display any of the following behaviours:	**No**	**Yes**	**Unknown**
Running away?	☐	☐	☐
Prostitution?	☐	☐	☐
Eating disorders?	☐	☐	☐
Suicide?	☐	☐	☐
Self Mutilation/Harm?	☐	☐	☐
Substance abuse?	☐	☐	☐
(if yes please identify_____)			
Physical Aggressiveness?	☐	☐	☐
Verbally Abusive to others?	☐	☐	☐
Fire Setting?	☐	☐	☐
Sexually inappropriate?	☐	☐	☐

YCRNA Results:

☐	☐	☐
L	**M**	**H**

Specifics:_____

Court Background

How old was the youth on his/her first offence?
☐ Under 13 years ☐ 13-15 years ☐ 16-18 years

Does the youth's court history include?

☐ Arson ☐ Breach ☐ Assault ☐ Sex Offence ☐ Drug Offence

☐ Property ☐ Weapons ☐ Other *(Please explain)* ☐ Failure to Comply

_____
_____
_____

	No	**Yes** *(Explain below)*	
Does the youth have any outstanding charges?	☐	☐	
Court date_____			
Is this youth currently in custody?	☐	☐	
Is this youth currently on remand?	☐	☐	
Has this youth ever been in custody?	☐	☐	
Does the youth have any of the following outstanding:			
Fines	☐	☐	$_____
Compensation / Restitution	☐	☐	$_____
Community Service Hours	☐	☐	#_____
Letter of Apology	☐	☐	Due_____
Essay	☐	☐	Due_____

Family Environment

With whom does the youth presently reside?

☐ Natural Family (both Parents)	☐ Group Home	☐ Blended Family
☐ Single Parent	☐ Foster Family	☐ Adoptive Family
☐ Other Family	☐ Independent Living/Youth Agreement	

Comments:_____

With whom will the youth reside upon graduation of program?
☐ Same as above ☐ Other_____

Describe release plan:_____
Residence, School, Counselling, etc.

_____

Parent / Child Relations:

	No	Yes	Unknown
Neglect of the Youth	☐	☐	☐
Parent / Youth communication problems	☐	☐	☐
Parent overly protective	☐	☐	☐
Use of excessive / strict discipline	☐	☐	☐
Parents cover for youth	☐	☐	☐
Permissive parenting	☐	☐	☐
Problem(s) involving step-parent	☐	☐	☐
Inconsistent use of discipline	☐	☐	☐
Physical fights between youth and parents	☐	☐	☐
Sexual Abuse concerns	☐	☐	☐

Have you discussed this referral with the youth?	☐	☐
Have you discussed this referral with the youth's family?	☐	☐
Has transportation to the program been arranged?	☐	☐

Has the youth been diagnosed with any of the following?	No	Yes	Unknown
ADHD (*Attention Deficit Hyperactivity Disorder*)	☐	☐	☐
ADD (*Attention Deficit Disorder)*	☐	☐	☐
RAD (*Reactive Attachment Disorder*)	☐	☐	☐
FAS (*Fetal Alcohol Syndrome*)	☐	☐	☐
FAE (*Fetal Alcohol Effect*)	☐	☐	☐
OCD (*Obsessive Compulsive Disorder)*	☐	☐	☐
Oppositionally Defiant	☐	☐	☐
Depression	☐	☐	☐
Mood Disorder	☐	☐	☐
Anxiety Disorder	☐	☐	☐
Psychosis	☐	☐	☐
Other (specify)_____			

Education	No	Yes
Is the youth currently enrolled in school?	☐	☐

If yes, please indicate the following:
*Current or last school attended:*_____

*Ph#*_____ *Fax#*_____
*Last Grade Completed:*_____ *Year:*_____

	No	**Yes**
Have any formal educational or learning difficulties assessments been completed on this youth? (if yes, please attach)	☐	☐
Can the youth return to school after graduating from the program?	☐	☐

Employment History_____

Have you attached?	**No**	**Yes**
Pre-Disposition Report	☐	☐
Probation Order (info, social history)	☐	☐

Goals of referral to the program:

_____

_____

Signature: _____ Date: _____

Appendix 4: Frequency Distribution on Variables of Interest

Frequency Table

A2 Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Cauc	42	29.6	45.7	45.7
	2 Native	38	26.8	41.3	87.0
	3 Asian	2	1.4	2.2	89.1
	4 Other	10	7.0	10.9	100.0
	Total	92	64.8	100.0	
Missing	9 Missing	50	35.2		
Total		142	100.0		

B1 YCRNA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 Medium	28	19.7	34.1	34.1
	3 High	54	38.0	65.9	100.0
	Total	82	57.7	100.0	
Missing	9 Not Indicated	60	42.3		
Total		142	100.0		

B2 First Offence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than 13 years	15	10.6	11.6	11.6
	2 13 - 15 years	82	57.7	63.6	75.2
	3 16 - 18 years	32	22.5	24.8	100.0
	Total	129	90.8	100.0	
Missing	9 Not indicated	13	9.2		
Total		142	100.0		

B3 Ref Offence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Property	28	19.7	21.1	21.1
	2 Personal	38	26.8	28.6	49.6
	3 Administrative	59	41.5	44.4	94.0
	4 Drug	7	4.9	5.3	99.2
	5 Other	1	.7	.8	100.0
	Total	133	93.7	100.0	
Missing	9 Not indicated	9	6.3		
Total		142	100.0		

C1 Living

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Family	53	37.3	37.9	37.9
	2 Independent	4	2.8	2.9	40.7
	3 Friends	3	2.1	2.1	42.9
	4 On street/NFA	14	9.9	10.0	52.9
	5 Custody	15	10.6	10.7	63.6
	6 Treatment service	2	1.4	1.4	65.0
	7 Other	49	34.5	35.0	100.0
	Total	140	98.6	100.0	
Missing	9 Not indicated	2	1.4		
Total		142	100.0		

C2 Family Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 In care of MCFD	49	34.5	35.8	35.8
	2 Natural Parents	20	14.1	14.6	50.4
	3 Adopted	2	1.4	1.5	51.8
	4 Blended	11	7.7	8.0	59.9
	5 Single Parent	48	33.8	35.0	94.9
	6 Other	7	4.9	5.1	100.0
	Total	137	96.5	100.0	
Missing	9 Not indicated	5	3.5		
Total		142	100.0		

C3 Fam Participate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	7	4.9	7.1	7.1
	1 Yes	90	63.4	91.8	99.0
	2	1	.7	1.0	100.0
	Total	98	69.0	100.0	
Missing	9 Not indicated	44	31.0		
Total		142	100.0		

C4 Neglect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	38	26.8	35.2	35.2
	1 Yes	58	40.8	53.7	88.9
	2 Unknown	12	8.5	11.1	100.0
	Total	108	76.1	100.0	
Missing	9 Not indicated	34	23.9		
Total		142	100.0		

C5 Physical Abuse

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	8	5.6	15.4	15.4
	1 Yes	43	30.3	82.7	98.1
	2 Unknown	1	.7	1.9	100.0
	Total	52	36.6	100.0	
Missing	9 Not indicated	90	63.4		
Total		142	100.0		

C6 Sexual Abuse

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	45	31.7	46.9	46.9
	1 Yes	35	24.6	36.5	83.3
	2 Unknown	16	11.3	16.7	100.0
	Total	96	67.6	100.0	
Missing	9 Not indicated	46	32.4		
Total		142	100.0		

C7 Substance Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	3	2.1	5.1	5.1
	1 Yes	55	38.7	93.2	98.3
	2 Unknown	1	.7	1.7	100.0
	Total	59	41.5	100.0	
Missing	9 Not indicated	83	58.5		
Total		142	100.0		

C8 Comm Prob

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	7	4.9	6.3	6.3
	1 Yes	100	70.4	90.1	96.4
	2 Unknown	4	2.8	3.6	100.0
	Total	111	78.2	100.0	
Missing	9 Not indicated	31	21.8		
Total		142	100.0		

C9 Protective

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	76	53.5	82.6	82.6
	1 Yes	6	4.2	6.5	89.1
	2 Unknown	10	7.0	10.9	100.0
	Total	92	64.8	100.0	
Missing	9 Not indicated	50	35.2		
Total		142	100.0		

C10 Discpline

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	65	45.8	69.1	69.1
	1 Yes	16	11.3	17.0	86.2
	2 Unknown	13	9.2	13.8	100.0
	Total	94	66.2	100.0	
Missing	9 Not indicated	48	33.8		
Total		142	100.0		

C11 Cover for youth

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	55	38.7	59.8	59.8
	1 Yes	16	11.3	17.4	77.2
	2 Unknown	21	14.8	22.8	100.0
	Total	92	64.8	100.0	
Missing	9 Not indicated	49	34.5		
	System	1	.7		
	Total	50	35.2		
Total		142	100.0		

C12 Permissive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	37	26.1	39.8	39.8
	1 Yes	46	32.4	49.5	89.2
	2 Unknown	10	7.0	10.8	100.0
	Total	93	65.5	100.0	
Missing	9 Not indicated	49	34.5		
Total		142	100.0		

C13 Step-parent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	50	35.2	51.5	51.5
	1 Yes	40	28.2	41.2	92.8
	2 Unknown	7	4.9	7.2	100.0
	Total	97	68.3	100.0	
Missing	9 Not indicated	45	31.7		
Total		142	100.0		

C14 Inconsistent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	30	21.1	33.0	33.0
	1 Yes	47	33.1	51.6	84.6
	2 Unknown	14	9.9	15.4	100.0
	Total	91	64.1	100.0	
Missing	9 Not indicated	51	35.9		
Total		142	100.0		

C15 Physical fights

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	32	22.5	33.3	33.3
	1 Yes	42	29.6	43.8	77.1
	2 Unknown	22	15.5	22.9	100.0
	Total	96	67.6	100.0	
Missing	9 Not indicated	46	32.4		
Total		142	100.0		

D1 School - enrolled

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	51	35.9	47.2	47.2
	1 Yes	57	40.1	52.8	100.0
	Total	108	76.1	100.0	
Missing	9 Not indicated	34	23.9		
Total		142	100.0		

D2 Last grade

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	4	2.8	3.3	3.3
	7	20	14.1	16.5	19.8
	8	40	28.2	33.1	52.9
	9	32	22.5	26.4	79.3
	10	24	16.9	19.8	99.2
	11	1	.7	.8	100.0
	Total	121	85.2	100.0	
Missing	99	21	14.8		
Total		142	100.0		

E1 Running Away

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	15	10.6	11.9	11.9
	1 Yes	111	78.2	88.1	100.0
	Total	126	88.7	100.0	
Missing	9 Not indicated	16	11.3		
Total		142	100.0		

E2 Prostitution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	36	25.4	31.3	31.3
	1 Yes	51	35.9	44.3	75.7
	2 Unknown	28	19.7	24.3	100.0
	Total	115	81.0	100.0	
Missing	9 Not indicated	27	19.0		
Total		142	100.0		

E3 Eating Disorder

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	77	54.2	66.4	66.4
	1 Yes	15	10.6	12.9	79.3
	2 Unknown	24	16.9	20.7	100.0
	Total	116	81.7	100.0	
Missing	9 Not indicated	26	18.3		
Total		142	100.0		

E4 Suicide

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	56	39.4	42.7	42.7
	1 Yes	62	43.7	47.3	90.1
	2 Unknown	13	9.2	9.9	100.0
	Total	131	92.3	100.0	
Missing	9 Not indicated	11	7.7		
Total		142	100.0		

E5 Self-harm

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	66	46.5	53.7	53.7
	1 Yes	40	28.2	32.5	86.2
	2 Unknown	17	12.0	13.8	100.0
	Total	123	86.6	100.0	
Missing	9 Not indicated	19	13.4		
Total		142	100.0		

E6 Aggressive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	37	26.1	29.8	29.8
	1 Yes	85	59.9	68.5	98.4
	2 Unknown	2	1.4	1.6	100.0
	Total	124	87.3	100.0	
Missing	9 Not indicated	18	12.7		
Total		142	100.0		

E7 Verbal Abusive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	27	19.0	26.0	26.0
	1 Yes	72	50.7	69.2	95.2
	2 Unknown	5	3.5	4.8	100.0
	Total	104	73.2	100.0	
Missing	9 Not indicated	38	26.8		
Total		142	100.0		

E8 Fire Starting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	94	66.2	95.9	95.9
	1 Yes	1	.7	1.0	96.9
	2 Unknown	3	2.1	3.1	100.0
	Total	98	69.0	100.0	
Missing	9 Not indicated	44	31.0		
Total		142	100.0		

E9 Sex Inappropriate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	65	45.8	63.7	63.7
	1 Yes	26	18.3	25.5	89.2
	2 Unknown	11	7.7	10.8	100.0
	Total	102	71.8	100.0	
Missing	9 Not indicated	40	28.2		
Total		142	100.0		

E10 ADD/ADHD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	85	59.9	69.1	69.1
	1 Yes	32	22.5	26.0	95.1
	2 Unknown	6	4.2	4.9	100.0
	Total	123	86.6	100.0	
Missing	9 Not indicated	19	13.4		
Total		142	100.0		

E11 RAD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	108	76.1	88.5	88.5
	1 Yes	5	3.5	4.1	92.6
	2 Unknown	9	6.3	7.4	100.0
	Total	122	85.9	100.0	
Missing	9 Not indicated	20	14.1		
Total		142	100.0		

E12 FAS/FAE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	102	71.8	82.9	82.9
	1 Yes	5	3.5	4.1	87.0
	2 Unknown	16	11.3	13.0	100.0
	Total	123	86.6	100.0	
Missing	9 Not indicated	19	13.4		
Total		142	100.0		

E13 OCD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	113	79.6	92.6	92.6
	1 Yes	1	.7	.8	93.4
	2 Unknown	8	5.6	6.6	100.0
	Total	122	85.9	100.0	
Missing	9 Not indicated	20	14.1		
Total		142	100.0		

E14 ODD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	99	69.7	81.1	81.1
	1 Yes	9	6.3	7.4	88.5
	2 Unknown	14	9.9	11.5	100.0
	Total	122	85.9	100.0	
Missing	9 Not indicated	20	14.1		
Total		142	100.0		

E15 Depression

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	70	49.3	57.4	57.4
	1 Yes	38	26.8	31.1	88.5
	2 Unknown	14	9.9	11.5	100.0
	Total	122	85.9	100.0	
Missing	9 Not indicated	20	14.1		
Total		142	100.0		

E16 Mood Disorder

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	103	72.5	84.4	84.4
	1 Yes	7	4.9	5.7	90.2
	2 Unknown	12	8.5	9.8	100.0
	Total	122	85.9	100.0	
Missing	9 Not indicated	19	13.4		
	System	1	.7		
	Total	20	14.1		
Total		142	100.0		

E17 Anxiety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	102	71.8	84.3	84.3
	1 Yes	10	7.0	8.3	92.6
	2 Unknown	9	6.3	7.4	100.0
	Total	121	85.2	100.0	
Missing	9 Not indicated	21	14.8		
Total		142	100.0		

E18 Psychosis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	113	79.6	91.9	91.9
	1 Yes	1	.7	.8	92.7
	2 Unknown	9	6.3	7.3	100.0
	Total	123	86.6	100.0	
Missing	9 Not indicated	19	13.4		
Total		142	100.0		

E19 Other MH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Borderline Personality Disorder	5	3.5	17.2	17.2
	2 Post-Traumatic Stress Disorder	3	2.1	10.3	27.6
	3 Conduct Disorder	15	10.6	51.7	79.3
	4 Neonatal Abstinence Syndrome	1	.7	3.4	82.8
	5 Bi-polar	3	2.1	10.3	93.1
	6 Adjustment Disorder	2	1.4	6.9	100.0
	Total	29	20.4	100.0	
Missing	System	113	79.6		
Total		142	100.0		

E20 Medication

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	84	59.2	71.8	71.8
	1 Yes	32	22.5	27.4	99.1
	2 Unknown	1	.7	.9	100.0
	Total	117	82.4	100.0	
Missing	9 Not indicated	25	17.6		
Total		142	100.0		

F1 Polydrug Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	3	2.1	2.1	2.1
	1 Yes	132	93.0	93.0	95.1
	9 Not indicated	7	4.9	4.9	100.0
	Total	142	100.0	100.0	

G1 Detox hx

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	80	56.3	64.0	64.0
	1 Yes	45	31.7	36.0	100.0
	Total	125	88.0	100.0	
Missing	9 Not indicated	17	12.0		
Total		142	100.0		

G2 Outpatient hx

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	47	33.1	37.3	37.3
	1 Yes	79	55.6	62.7	100.0
	Total	126	88.7	100.0	
Missing	9 Not indicated	16	11.3		
Total		142	100.0		

G3 Forensic hx

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	67	47.2	52.3	52.3
	1 Yes	61	43.0	47.7	100.0
	Total	128	90.1	100.0	
Missing	9 Not indicated	14	9.9		
Total		142	100.0		

G4 Residential hx

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	83	58.5	64.8	64.8
	1 Yes	45	31.7	35.2	100.0
	Total	128	90.1	100.0	
Missing	9 Not indicated	14	9.9		
Total		142	100.0		

Multiple Response

$DrugofChoice Frequencies

		Responses		Percent of Cases
		N	Percent	
$DrugofChoice[a]	Marijuana	105	30.0%	73.4%
	Alcohol	47	13.4%	32.9%
	Cocaine	77	22.0%	53.8%
	Heroin	47	13.4%	32.9%
	LSD	1	.3%	.7%
	Mushrooms	1	.3%	.7%
	PCP	1	.3%	.7%
	Crystal Meth	66	18.9%	46.2%
	Methadone	1	.3%	.7%
	Other	4	1.1%	2.8%
Total		350	100.0%	244.8%

a. Group

$AgeofOnset Frequencies

		Responses		Percent of Cases
		N	Percent	
$AgeofOnset[a]	7	2	.6%	1.6%
	8	4	1.3%	3.2%
	9	13	4.2%	10.5%
	10	9	2.9%	7.3%
	11	28	9.1%	22.6%
	12	62	20.1%	50.0%
	13	66	21.4%	53.2%
	14	68	22.0%	54.8%
	15	35	11.3%	28.2%
	16	18	5.8%	14.5%
	17	2	.6%	1.6%
	18	2	.6%	1.6%
Total		309	100.0%	249.2%

a. Group

$Motivation Frequencies

		Responses		Percent of Cases
		N	Percent	
$Motivation[a]	Precontemplative	37	18.0%	44.6%
	Contemplative	103	50.0%	124.1%
	Determined	49	23.8%	59.0%
	Action	16	7.8%	19.3%
	Maintenance	1	.5%	1.2%
Total		206	100.0%	248.2%

a. Group

Appendix 5: Comparison of Treatment and Non-Treatment Groups

Ethnicity * Admitted`

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
A2 Ethnicity	1 Cauc	3	39	42
	2 Native	18	20	38
	3 Asian	1	1	2
	4 Other	3	7	10
Total		25	67	92

$X^{2} = 16.91$ df = 3 p = .001[4]

YCRNA * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
B1 YCRNA	2 Medium	12	16	28
	3 High	24	30	54
Total		36	46	82

$X^{2} = .019$ df = 1 p = .891

First Offence * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
B2 First Offence	1 Less than 13 years	8	7	15
	2 13 - 15 years	39	43	82
	3 16 - 18 years	11	21	32
Total		58	71	129

$X^{2} = 2.098$ df = 2 p = .350

[4] Note that ethnicity information was available for admitted clients, whereas referral package information only includes a Native/Non-Native item.

Referring Offence * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
B3 Ref Offence	1 Property	10	18	28
	2 Personal	18	20	38
	3 Administrative	24	35	59
	4 Drug	6	1	7
	5 Other	1	0	1
Total		59	74	133

$X^2 = 7.416$ df = 4 p = .115

Living * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C1 Living	1 Family	22	31	53
	2 Independent	2	2	4
	3 Friends	2	1	3
	4 On street/NFA	7	7	14
	5 Custody	7	8	15
	6 Treatment service	2	0	2
	7 Other	24	25	49
Total		66	74	140

$X^2 = 3.503$ df = 6 p = .744

Family Type * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C2 Family Type	1 In care of MCFD	29	20	49
	2 Natural Parents	6	14	20
	3 Adopted	0	2	2
	4 Blended	3	8	11
	5 Single Parent	18	30	48
	6 Other	6	1	7
Total		62	75	137

$X^2 = 14.595$ df = 5 p = .012

Family Participation * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C3 Fam Participate	0 No	7	0	7
	1 Yes	29	61	90
	2	0	1	1
Total		36	62	98

$X^2 = 13.425$ df = 2 p = .001

Neglect * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C4 Neglect	0 No	14	24	38
	1 Yes	33	25	58
	2 Unknown	5	7	12
Total		52	56	108

$X^2 = 3.926$ df = 2 p = .140

Physical Abuse * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C5 Physical Abuse	0 No	4	4	8
	1 Yes	25	18	43
	2 Unknown	1	0	1
Total		30	22	52

$X^2 = 9.31$ df = 2 p = .628

Sexual Abuse * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C6 Sexual Abuse	0 No	20	25	45
	1 Yes	19	16	35
	2 Unknown	6	10	16
Total		45	51	96

$X^2 = 1.443$ df = 2 p = .486

Substance Use * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C7 Substance Use	0 No	2	1	3
	1 Yes	30	25	55
	2 Unknown	0	1	1
Total		32	27	59

$X^2 = 1.374$ df = 2 p = .503

Communication Problem * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C8 Comm Prob	0 No	4	3	7
	1 Yes	42	58	100
	2 Unknown	2	2	4
Total		48	63	111

$X^2 = .688$ df = 2 p = .709

Protective Parenting * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C9 Protective	0 No	34	42	76
	1 Yes	4	2	6
	2 Unknown	5	5	10
Total		43	49	92

$X^2 = 1.122$ df = 2 p = .571

Excessive Discipline * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C10 Discpline	0 No	32	33	65
	1 Yes	8	8	16
	2 Unknown	3	10	13
Total		43	51	94

$X^2 = 3.126$ df = 2 p = .209

Parents cover for youth * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C11 Cover for youth	0 No	25	30	55
	1 Yes	6	10	16
	2 Unknown	10	11	21
Total		41	51	92

$X^2 = .420$ df = 2 p = .811

Permissive Parenting * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C12 Permissive	0 No	14	23	37
	1 Yes	21	25	46
	2 Unknown	8	2	10
Total		43	50	93

$X^2 = 5.642$ df = 2 p = .060

Problem with Step-parent * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C13 Step-parent	0 No	19	31	50
	1 Yes	20	20	40
	2 Unknown	7	0	7
Total		46	51	97

$X^2 = 9.648$ df = 2 p = .008

Inconsistent Discipline* Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C14 Inconsistent	0 No	11	19	30
	1 Yes	22	25	47
	2 Unknown	9	5	14
Total		42	49	91

$X^2 = 2.947$ df = 2 p = .229

Physical fights * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
C15 Physical fights	0 No	13	19	32
	1 Yes	20	22	42
	2 Unknown	13	9	22
Total		46	50	96

$X^2 = 1.784$ df = 2 p = .410

School - enrolled * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
D1 School - enrolled	0 No	27	24	51
	1 Yes	26	31	57
Total		53	55	108

$X^2 = 5.78$ df = 1 p = .447

Last grade completed * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
D2 Last grade	6	3	1	4
	7	14	6	20
	8	16	24	40
	9	15	17	32
	10	7	17	24
	11	0	1	1
Total		55	66	121

$X^2 = 10.176$ df = 5 p = .070

Running Away * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E1 Running Away	0 No	7	8	15
	1 Yes	51	60	111
Total		58	68	126

$X^2 = .003$ df = 1 p = .958

Prostitution * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E2 Prostitution	0 No	17	19	36
	1 Yes	22	29	51
	2 Unknown	13	15	28
Total		52	63	115

$X^2 = .164$ df = 2 p = .921

Eating Disorder * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E3 Eating Disorder	0 No	38	39	77
	1 Yes	7	8	15
	2 Unknown	10	14	24
Total		55	61	116

$X^2 = .437$ df = 2 p = .804

Suicide * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E4 Suicide	0 No	29	27	56
	1 Yes	24	38	62
	2 Unknown	8	5	13
Total		61	70	131

$X^2 = 3.322$ df = 2 p = .190

Self-harm * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E5 Self-harm	0 No	35	31	66
	1 Yes	14	26	40
	2 Unknown	7	10	17
Total		56	67	123

$X^2 = 3.415$ df = 2 p = .181

Aggressive * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E6 Aggressive	0 No	16	21	37
	1 Yes	42	43	85
	2 Unknown	1	1	2
Total		59	65	124

$X^2 = .398$ df = 2 p = .820

Verbal Abusive * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E7 Verbal Abusive	0 No	16	11	27
	1 Yes	29	43	72
	2 Unknown	3	2	5
Total		48	56	104

$X^2 = 3.252$ df = 2 p = .197

Fire Starting * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E8 Fire Starting	0 No	39	55	94
	1 Yes	1	0	1
	2 Unknown	1	2	3
Total		41	57	98

$X^2 = 1.484$ df = 2 p = .476

Sexually Inappropriate * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E9 Sex Inappropriate	0 No	28	37	65
	1 Yes	12	14	26
	2 Unknown	5	6	11
Total		45	57	102

$X^2 = .080$ df = 2 p = .961

ADD/ADHD * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E10 ADD/ADHD	0 No	38	47	85
	1 Yes	16	16	32
	2 Unknown	3	3	6
Total		57	66	123

$X^2 = 2.96$ df = 2 p = .862

RAD * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E11 RAD	0 No	51	57	108
	1 Yes	3	2	5
	2 Unknown	3	6	9
Total		57	65	122

$X^{2} = 1.013$ df = 2 p = .603

FAS/FAE * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E12 FAS/FAE	0 No	48	54	102
	1 Yes	2	3	5
	2 Unknown	7	9	16
Total		57	66	123

$X^{2} = .145$ df = 2 p = .930

OCD * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E13 OCD	0 No	53	60	113
	1 Yes	1	0	1
	2 Unknown	3	5	8
Total		57	65	122

$X^{2} = 1.415$ df = 2 p = .493

ODD * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E14 ODD	0 No	48	51	99
	1 Yes	5	4	9
	2 Unknown	4	10	14
Total		57	65	122

$X^2 = 2.259$ df = 2 p = .323

Depression * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E15 Depression	0 No	36	34	70
	1 Yes	15	23	38
	2 Unknown	6	8	14
Total		57	65	122

$X^2 = 1.509$ df = 2 p = .470

Mood Disorder * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E16 Mood Disorder	0 No	51	52	103
	1 Yes	2	5	7
	2 Unknown	4	8	12
Total		57	65	122

$X^2 = 2.113$ df = 2 p = .348

Anxiety * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E17 Anxiety	0 No	50	52	102
	1 Yes	5	5	10
	2 Unknown	2	7	9
Total		57	64	121

$X^2 = 2.420$ df = 2 p = .298

Psychosis * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E18 Psychosis	0 No	56	57	113
	1 Yes	0	1	1
	2 Unknown	1	8	9
Total		57	66	123

$X^2 = 5.826$ df = 2 p = .054

Other MH * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E19 Other MH	1 Borderline Personality Disorder	2	3	5
	2 Post-Traumatic Stress Disorder	0	3	3
	3 Conduct Disorder	9	6	15
	4 Neonatal Abstinence Syndrome	0	1	1
	5 Bi-polar	1	2	3
	6 Adjustment Disorder	2	0	2
Total		14	15	29

$X^2 = 7.107$ df = 5 p = .213

Medication * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
E20 Medication	0 No	36	48	84
	1 Yes	13	19	32
	2 Unknown	0	1	1
Total		49	68	117

$X^2 = .774$ df = 2 p = .679

Polydrug Use * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
F1 Polydrug Use	0 No	1	2	3
	1 Yes	60	72	132
	9 Not indicated	5	2	7
Total		66	76	142

$X^2 = 2.016$ df = 2 p = .365

Detox hx * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G1 Detox hx	0 No	34	46	80
	1 Yes	18	27	45
Total		52	73	125

$X^2 = .074$ df = 1 p = .468

Completed * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G1a Completed	0 No	6	9	15
	1 Yes	11	9	20
Total		17	18	35

$X^2 = .772$ df = 1 p = .296

If not, why * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G1a1 If not, why	1 Relapse/Awol	0	3	3
	2 Other	4	1	5
Total		4	4	8

$X^2 = 4.800$ df = 1 p = .071

Outpatient hx * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G2 Outpatient hx	0 No	24	23	47
	1 Yes	29	50	79
Total		53	73	126

$X^2 = 2.492$ df = 1 p = .114

Attends * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G2a Attends	0 No	12	18	30
	1 Yes	3	2	5
Total		15	20	35

$X^2 = .700$ df = 1 p = .360

If not, why * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G2a1 If not, why	1 Actively using	5	11	16
	2 Other	3	6	9
Total		8	17	25

$X^2 = .011$ df = 1 p = .626

Forensic hx * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G3 Forensic hx	0 No	34	33	67
	1 Yes	22	39	61
Total		56	72	128

$X^2 = 2.796$ df = 1 p = .067

Completed * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G3a Completed	0 No	9	10	19
	1 Yes	11	16	27
Total		20	26	46

$X^2 = .199$ df = 1 p = .442

If not, why * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G3a1 If not, why	3 Other	9	10	19
Total		9	10	19

Residential hx * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G4 Residential hx	0 No	32	51	83
	1 Yes	24	21	45
Total		56	72	128

$X^2 = 2.590$ df = 1 p = .078

Completed * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G4a Completed	0 No	12	11	23
	1 Yes	10	7	17
Total		22	18	40

$X^{2} = .175$ df = 1 p = .462

If not, why * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
G4a1 If not, why	1 Relapse/AWOL	5	4	9
	2 Discharged for behaviour	2	4	6
	3 Other	2	0	2
Total		9	8	17

$X^{2} = 2.728$ df = 2 p = .256

Rtn school * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
I1 Rtn school	0 No	0	1	1
	1 Yes	26	45	71
	2 Unknown	0	2	2
Total		26	48	74

$X^{2} = 1.694$ df = 2 p = .429

Add cg * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
I2 Add cg	0 No	0	2	2
	1 Yes	27	32	59
	2 Unknown	0	2	2
Total		27	36	63

$X^2 = 3.203$ df = 2 p = .202

Ind Living * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
I4 Ind Living	0 No	43	45	88
	1 Yes	12	17	29
	2 Unknown	0	3	3
Total		55	65	120

$X^2 = 3.096$ df = 2 p = .213

Grp Home * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
I5 Grp Home	0 No	44	58	102
	1 Yes	10	4	14
	2 Unknown	0	3	3
Total		54	65	119

$X^2 = 6.532$ df = 2 p = .038

Work * Admitted

Crosstab

Count

		H1 Admitted		
		0 No	1 Yes	Total
I6 Work	0 No	2	0	2
	1 Yes	3	13	16
	2 Unknown	0	2	2
Total		5	15	20

$X^2 = 7.000$ df = 2 p = .030