



The Effectiveness of Substance Abuse Treatment with Young Offenders



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of the author and do not necessarily reflect those
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Executive Summary

Previous research has demonstrated that substance abuse is a key need area for young offenders and contributes to their criminal activity. The negative impacts of this problem behaviour are not only limited to delinquency but are also evident in several other important behavioural areas for the adolescent including academics, peer group involvement, and family relationships.

Given the strong relationship between substance abuse and delinquency, many academics and practitioners alike have focused on developing effective treatment programs. The extant literature has identified several key areas that affect the therapeutic potential of these types of programs for adolescent substance abusers and include: pre-treatment factors, in-treatment factors, and post-treatment factors.

Pre-treatment factors are essentially equivalent to client characteristics such as age, gender, and race/ethnicity and are important treatment considerations as they may affect program content and/or delivery style. The advantage of designing gender- and/or racial-specific treatment is that it will increase the relevance of the program to these youth, thereby maximizing client retention and enhancing program performance. In addition, certain variables from this set of pre-treatment factors have been found to affect client outcome in substance abuse treatment. For example, underlying psychopathology is one of the strongest predictors of program attrition and poor performance.

In-treatment factors correspond to issues surrounding the process of program administration, including program content and delivery aspects as well as more external considerations such as the organizational environment in which the program is delivered. In terms of program content and delivery variables, the literature clearly illustrates that in order for substance abuse treatment to be effective, it should target the multiple need areas of youthful offenders, including family, academic, and peer problems, while incorporating elements of relapse prevention. In addition, research has demonstrated quite strongly that the program should employ behavioural/cognitive-behavioural methods to impart program content to the clients. In terms of key organizational variables, it is strongly recommended that programs should be delivered in community as opposed to residential settings and attend to various indicators of program integrity such as appropriate training and monitoring of program staff.

Post-treatment factors represent those areas that can be targeted by criminal justice agencies once the client has left the program. Two of the most important are the provision of aftercare services to the youth and identifying and enhancing protective factors. The few studies that have explored the effectiveness of aftercare services within a correctional population have shown mild reductions in re-offending, but this conclusion is tempered by the limited amount of available data. Unfortunately, none of the young offender literature reviewed for this report studied the impact of protective factors on correctional treatment outcome.

Several other concerns have been raised in the literature when dealing with substance abusing young offenders. Program dropout is quite high within this population and researchers have made several solid recommendations in order to address this problem area. HIV/AIDS is another critical health issue, both for the offender and the outside community to which he or she returns. Given the high levels of HIV/AIDS in correctional populations, and the fact that young offenders are even more at

risk than their adult counterparts, ensuring that comprehensive and systematic programming in this area is of paramount importance.

One of the key debates that has been staged in the substance abuse treatment literature is how to define an effective program. More specifically, given the multiple areas that are affected by substance abusing behaviour, it has been extremely difficult for researchers to agree on a single or comprehensive set of program success indicators. Several recent efforts have attempted to address this problem area and have focused on the methodological criteria used in the evaluation, as well as the outcomes measured by the program. Concomitantly, these recommendations suggest that programs should use classical experimental designs utilizing the most stringent controls as well as measuring the impacts of the program across many different areas including physical, emotional, and behavioural outcomes.

There are several clear directions for future research, which would touch several of the different areas mentioned within this report. One particularly important research project would be to conduct a series of focus groups with young offenders across Canada to determine the factors that are linked with their substance abusing and criminal behaviour, and more importantly, identify potentially motivating and de-motivating factors that affect their involvement in treatment. An additional line of scientific inquiry would be to explore the presence of strength or protective factors in this group of adolescents and explore how these may be more appropriately incorporated into the treatment protocol.

Finally, based on the entire literature reviewed for this report, this paper concludes with a checklist that can be used by program administrators to develop effective substance abuse programming.

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1.0 Introduction

1.1 Background

The prevention of criminal behaviour, especially in young offender populations, has become an increasingly important enterprise for criminal justice professionals. As such, considerable research attention has been devoted to identifying and documenting the factors that place an adolescent at risk for engaging in delinquent behaviour. Past research has consistently demonstrated that both static and dynamic risk factors are linked with criminal activity. Since static risk factors, such as criminal history, remain constant and do not change as a function of intervention, the primary thrust of correctional research has been in the identification of dynamic risk factors that are linked with criminal behaviour (also termed criminogenic needs¹). The importance of emphasizing dynamic rather than static risk factors for both risk assessment and treatment delivery has been noted by several researchers (Andrews & Bonta, 1998; Farabee, Shen, Hser, Grella, & Anglin, 2001; Gendreau, 1996), and one of the most prominent dynamic risk factors identified has been substance abuse.

Several terms have been used interchangeably in the extant literature to represent problematic substance involvement, including substance use, abuse, dependence, and addiction (Gilvarry, 2000). However, despite this range of terms, only substance abuse and dependence have officially recognized diagnostic criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994). A substance abuser is characterized as someone who encounters negative social and/or interpersonal consequences as a result of their substance abuse. Substance dependence is viewed as a more extreme diagnosis as an individual must exhibit signs of addiction such as increased tolerance to the substance and/or symptoms of withdrawal once use is terminated. For the purposes of the present review, both substance abusing and dependent youth will be considered.

It is also important to note at the outset that this paper will not examine sociologically-based factors that may contribute to the substance abusing behaviour of adolescents. Since the primary thrust of this review is to identify successful treatment program components for individual offenders, reviewing sociologically-based indicators would be inappropriate as it would be extremely difficult to develop a program that could satisfactorily address these factors (such as poverty) within treatment. Therefore, the review will only focus on those variables that are readily transferable to a treatment program that could be offered to a youth in need.

¹ Changes in dynamic factors that do not necessarily reduce recidivism but may nonetheless generate some benefit (e.g., enhanced self-worth) are known as noncriminogenic needs (Andrews & Bonta, 1998; Andrews, Bonta & Hoge, 1990)

2.0 Antecedents and Consequences of Substance Abuse

Strong linkages between substance abuse and delinquent activity have been documented in the young offender literature² (Dawkins, 1997; Donovan & Jessor, 1985; Farabee et al., 2001; Fergusson, Lynskey, & Horwood, 1996; Huizinga & Jakob-Chien, 1998; Jessor & Jessor, 1977; Pickrel & Henggeler, 1996; Watts & Wright, 1990), with similar findings reported in the adult literature (Andrews & Bonta, 1998; McVie, 2001; Pelissier & Gaes, 2001; Weekes, Moser, & Langevin, 1998). Past research has demonstrated that there is also a clear link between alcohol or drug abuse and violent crime (Fergusson et al., 1996; Watts & Wright, 1990), including homicide (Yu & Williford, 1994). This latter trend is consistent with findings from studies of non-delinquent populations where increased alcohol consumption has been associated with more aggressive behaviour (Bushman & Cooper, 1990; Gustafson, 1993; Taylor & Chermack, 1993).

Watts and Wright (1990) provided several compelling explanations that may account for the strong relationship between substance abuse and criminal behaviour for young offenders. First, the use and abuse of substances may be seen by the young offender as an integral part of the “tough guy” image required for acceptance within their peer group, which is predominantly antisocial. Second, the adolescent may engage in excessive substance use in order to obtain greater parental attention or, conversely, to act defiantly towards parental authority. In addition, and as has been suggested elsewhere, abusing substances provides an escape from the real world. Their final, and more biologically-based explanation, argues that young offenders suffer from a chronic state of under-arousal and so turn to substance abuse as a means to enhance stimulation, a tenet related to the disease model of alcoholism.

The relationship between alcohol/drug abuse and delinquent activity has been maintained across various demographic categories, including racial-ethnic minorities such as Mexican-American and Black youth (Dawkins & Dawkins, 1983; Farrell, Danish, & Howard, 1992; Watts & Wright, 1990). In terms of gender, this relationship has also been observed within both male and female adolescents (Farrell et al., 1992; Fergusson et al., 1996).

The impact of substance abuse on the lives of adolescents is not solely restricted to delinquent behaviour, which has led criminal justice agencies to dedicate enormous fiscal and human resources to this important issue (Crowe, 1998). Substance abuse has been linked to poor school performance, physical and mental health problems, problematic peer involvement and poor family relations (Crowe, 1998; Farrell et al., 1992; Fergusson et al., 1996; Gilvarry, 2000). The cross-cultural application of these relationships can be seen in a recent study which found that the most prominent self-reported risk factors for problematic drug use in a sample of British young offenders were family disruption, low educational achievement, associating with delinquent peer groups, having a very early age of onset of drug use (Newburn, 1999). Based on

² A caveat should be mentioned at the beginning of this review. Currently, there is no universally accepted definition of what constitutes a young offender in the criminological literature because, depending on country of origin, the ranges employed may differ (e.g., in Canada, a young offender is classified as someone who is between 12-17 years of age. For example, as noted in a recent meta-analytic review of the young offender literature by Cottle and colleagues (2001), some studies classified individuals younger than 21 years of age as juvenile offenders. Thus, although the majority of studies reviewed for this report would meet the Canadian standard, some may include some “young adults.”



this plethora of evidence, Huizinga and Jakob-Chien (1998) emphatically asserted that the support for the co-occurrence of substance abuse with various problem behaviours, including delinquency, is irrefutable.

There is also emerging evidence that certain types of psychopathology occur more frequently in substance-abusing as opposed to nonsubstance-abusing juvenile delinquents. For example, Milin, Halikas, Meller and Morse (1994) found significantly higher levels of Attention Deficit Disorder and the aggressive subtype of conduct disorder in a sample of adolescent offenders. Furthermore, substance abuse disorders have been found to more commonly co-occur with mood disorders, including major depression (Hovens, Cantwell, & Kiriakos, 1994; Rohde, Lewinsohn, & Seeley, 1996). Finally, a Canadian study revealed elevated levels of psychopathy (a personality disorder characterized by lack of empathy, egocentrism, and impulsivity) in young offenders who were more serious substance abusers (Mailloux, Forth, & Kroner, 1997).

Given these negative relationships between substance abuse and a series of other outcomes, researchers have been concerned with identifying whether substance use/abuse and delinquency are causally related (e.g., involvement in substance abuse causes the youth to become engaged in criminal activity) or whether these variables share a common developmental pathway (e.g., the factors that put an individual at risk for abusing substances would also place him/her at risk of delinquent behaviour). Regardless of the exact nature of the relationship, the high co-occurrence of these behaviours necessitates that substance abuse be considered a high priority when developing a treatment protocol for young offenders (Watts & Wright, 1990).

2.1 Moderating variables

Although there is a clear relationship between substance abuse and delinquency, previous research has also found that certain factors may either strengthen or weaken the observed magnitude, and even direction, of this relationship. For example, although church attendance does not affect substance abuse in adolescents (Farrell et al., 1992), parental alcohol involvement has a negative influence (Yu & Williford, 1994) as well as increases their risk for recidivism (Dowden & Brown, 2002).

Perhaps the most influential variable affecting the substance abuse – delinquency relationship is age of onset, with several studies documenting that earlier involvement in substance abuse is associated with increased criminal activity (Fergusson & Horwood, 1997; Fleming, Kellam, & Brown, 1982; Newcomb & Bentler, 1988; Robins & Pryzbeck, 1985; Van Kammen, Loeber, & Stouthamer-Loeber, 1991; Yu & Williford, 1994). Evidence from a study exploring a large sample of Canadian federal male offenders reported that offenders who had used alcohol or drugs at an earlier age were convicted of a criminal offence at a significantly younger age than offenders who became involved in substance abuse later in their lives. Furthermore, these earlier abusers were also much more likely to have developed a substance abuse problem as an adult (Vanderburg, Weekes, & Wilson, 1995). The strength of this relationship is further enhanced when offenders become engaged in substance use/abuse during their formative years (birth to six years), a result that has been found in both Canadian (Vanderburg et al., 1995) and American studies (Van Kammen et al., 1991).

Another variable that may moderate the relationship between substance use and criminal behaviour for young offenders is the type of subsequent offending behaviour (Dawkins, 1997; Loeber, 1988; Yu & Williford, 1994). For example, Watts and Wright (1990) found that the best predictor of violent delinquency in their sample of young offenders was frequent use of illegal drugs other than marijuana. Other researchers have noted that although there is a strong relationship between substance abuse and juvenile delinquency for some adolescents, this relationship does not exist for others (Fagan, Weis, Chang, & Watters, 1987; White, 1991).

Methodological Considerations

The vast majority of research conducted on the co-occurrence of substance abuse and criminal behaviour in young offender populations has employed self-report measures. Although some concern has been raised about the reliability of this form of assessment, several researchers have demonstrated that adolescents accurately report their involvement in both delinquent (Hindelang, Hirschi, & Weis, 1981; Huizinga & Elliott, 1981) and substance using activities (Rouse, Kozel, & Richards, 1985; Single, Kandle, & Johnson, 1975). One of the primary advantages of self-report measures is that they provide a more sensitive and complete measure of the behaviours of interest than official criminal justice records because certain delinquent or otherwise antisocial acts may go officially unnoticed (Elliott, Huizinga, & Menard, 1989).



3.0 Substance Abuse Treatment for Youthful Offenders: What Works!

Unfortunately, there has been a paucity of research examining the provision of substance abuse treatment services to young offenders (Dobkin, Chabot, Maliantovich, & Craig, 1998; Gilvarry, 2000; Pickrel & Henggeler, 1996). Consequently, it was necessary to review other sources to extract relevant treatment information that may be pertinent to adolescent offender populations. More specifically, articles were reviewed within the general offender treatment literature (including both youth and adult samples) as well as, to a lesser extent, the adolescent substance abuse treatment literature. The decision was made to reduce the amount of exposure to the adolescent substance abuse treatment literature given the potential incompatibility of both samples. Support for the latter decision is based on the work of Cottle et al. (2001) who argued that first-time offenders can be reasonably assumed to be distinct from repeat offenders. This line of reasoning can be extrapolated quite nicely to argue for the potential incompatibility of delinquent and non-delinquent populations as well.

Wilson, Gottfredson, and Najaka (2001) recently argued that meta-analysis should be the method of choice for evaluating program effectiveness because it tests quantifiable post-treatment differences between a treatment and comparison group extracted from a series of studies in the extant literature. Therefore, several offender and non-offender based meta-analyses will be reviewed in this section. Single studies also will be inserted where appropriate to augment the discussion and provide concrete examples of either the points of interest or to present avenues for future research.

Catalano, Hawkins, Wells, and Miller (1990) suggested that researchers should examine pre-treatment, in-treatment, and post-treatment variables when exploring the effectiveness of substance abuse treatment. This is an elegant way of representing the multiple influences that may be operating on a correctional program at any given time and so this format has been adopted for this report.

3.1 Pre-treatment variables

Catalano et al. (1990) identified several characteristics of program participants that may play an important role in the determination of client outcome. Some examples of the more commonly discussed aspects in the research literature include age, gender, race/ethnicity, age of onset, history of substance use, and psychopathology.

3.1.1 Age

The findings related to age of participant are quite contradictory. For example, certain studies have reported that younger participants do better, while others have documented that older individuals experience enhanced programmatic effects (Feigelman, 1987; Hubbard, Cavanaugh, Craddock, & Rachal, 1985). Still others have concluded that age does not have any impact on treatment outcome (Sells & Simpson, 1979). It should be noted that these studies were conducted on non-offender populations and it may be valuable to examine what relationships, if any, occur between age of participant and programmatic effects in young offender research. The findings of two meta-analyses that have been conducted on the broader correctional treatment literature may provide some preliminary insight into this question.

Latimer (2001) conducted a meta-analytic review of the family intervention literature for young offenders and reported that programs that engaged participants who were younger than 15 years of age yielded significantly higher mean reductions in re-offending than programs that engaged older clients. More related to the present review, Dowden (1998) conducted a meta-analysis of the entire correctional treatment literature for both adult and juvenile offenders. In a preliminary analysis of programs that addressed substance abuse as at least one of its program targets, the findings were quite similar to those reported by Latimer, in that age had an inverse correlation with program success. These findings complement quite nicely the fervent arguments made by other researchers regarding the importance of early identification and treatment of substance abuse problems in adolescent populations (Webster-Stratton & Taylor, 1998).

Thus, the preliminary correctional-based evidence that is available suggests that, unlike the broader adolescent substance abuse treatment literature, age of client may have an important impact on treatment success.

3.1.2 Gender

It may be assumed, based on past evidence, that since substance abuse and juvenile delinquency co-occur in both male and female young offenders, targeting this criminogenic need for intervention would yield positive programmatic effects for both genders. Once again, the meta-analytic database of Dowden (1998) was consulted to explore this question. Although there were too few cases involved in substance abuse treatment to examine the differential effectiveness of treatment for both male and female adolescent offenders, when both adult and juvenile offenders in substance abuse treatment were examined, the same positive programmatic impacts were found for both male and female offenders.

It should be noted that despite the positive findings for both genders, this analysis does not address issues related to program delivery. More specifically, it does not indicate whether delivering the program in a particular way or focusing on specific material may make it more relevant or therapeutically meaningful for one gender over another. For example, several advocates for gender-specific treatment have argued for the importance of attending to relationship-oriented issues within treatment for female offenders (Bloom, 1999; Covington, 1998). Unfortunately, this recommendation has not yet been tested. Therefore, future evaluations should explore gender-specific responses to treatment and identify positive program delivery aspects.

3.1.3 Race/Ethnicity

Unfortunately, although issues relating to gender may be seriously underrepresented in correctional treatment literature, this state of affairs is similar, if not worsened, when issues surrounding race/ethnicity are explored. Several researchers have lamented the lack of attention given to race/ethnicity issues within substance abuse treatment programs, despite their clear importance to delivering effective and appropriate treatment to this population (McNeece, Springer, & Arnold, 2001; Rhodes & Jason, 1990).

Within Canada in particular, Aboriginal offenders represent an increasingly important correctional population since they make up only 3% of the general population, but account for 17% of Canadian federal inmates (Andrews, Dowden, & Rettinger, 2001; Motiuk & Nafekh,



2000; Nafekh, 2002). This trend is expected to continue unless significant resources are committed to this problem (Boe, 2000). Unfortunately, none of the studies reviewed for this report focused on youthful Aboriginal offenders so studies focusing on adult Aboriginal offender populations were reviewed to identify potentially relevant treatment issues.

Motiuk and Nafekh (2000) reported that substance abuse was one of the core criminogenic needs for both male and female Aboriginal offenders in the Canadian criminal justice system, a finding echoed in a more recent study by Nafekh (2002). This latter study provided overwhelming evidence for the critical role of substance abuse in this population as 95% of the Aboriginals in this study exhibited problems in this area. Given the widespread substance abuse problems encountered within this population, treatment protocols for Aboriginal offenders should address this treatment need.

Finally, the design and implementation of correctional programming for Aboriginals must ensure that it is both culturally sensitive and relevant to enhance its clinical utility. Researchers have argued that key Aboriginal beliefs and cultural practices such as healing, reconciliation, spirituality, respect, accountability, balance, and restoration must be incorporated into the treatment program in order for it to be effective (Wilson, 2000).

The literature, although sparse, does provide some preliminary evidence for the provision of culturally specific treatment services to Aboriginal offenders. For example, a recent follow-up study conducted by Correctional Services Canada of federal Aboriginal offenders admitted to Healing Lodges³ found that almost 70% of the clients completed the programs. In addition, and arguably more important, only 6% of program clients returned to custody, a statistic which is even more impressive when one considers that the national average is 12% (Wilson, 2000). Further evidence regarding the importance of culturally-specific treatment is obtained from the work of Waldram (1994) who found promising evidence for Aboriginal spirituality using a case study approach. Finally, research conducted in New Zealand has found lower rates of re-offending among Maori offenders who reported cultural pride and cultural knowledge (Maxwell, 1999, cf. Andrews, Dowden, & Rettinger, 2001).

These findings have strong applicability to Aboriginal young offender populations and have provided several important areas of scientific inquiry. However, much more research needs to be conducted as a significant knowledge gap currently exists.

3.1.4 Age of onset

Past research has found that the age of onset of substance use is not only related to involvement in delinquent activities but also to success in treatment. More specifically, several studies have reported that the earlier the age of substance abuse onset reported by adolescents, the poorer the treatment outcome (De Angelis, Koon, & Golstein, 1990; Feigelman, 1987; Friedman, Glickman, & Morrissey, 1986). Unfortunately, these studies did not examine young offender populations and so caution should be exercised when considering the external generalizability of the results.

³ Treatment facilities which provide culturally sensitive and relevant programs

3.1.5 Psychopathology

Psychopathology has been noted as one of the most persistent indicators of negative program outcome and thus several researchers have stressed the need to address this issue within treatment. As discussed by Randall, Henggeler, Pickrel, & Brondino (1999), symptoms can be classified as either externalizing or internalizing, with the former being strongly related to unsuccessful program completion in both correctional (Hiller, Knight, & Simpson, 1999a) as well as non-correctional samples (Dobkin et al., 1998; Kaminer, Tarter, Bukstein, & Kabene, 1992).

A recent study conducted in Quebec by Dobkin et al. (1998) explored the therapeutic impact of a multistage 12 month substance abuse treatment program that was divided into two months of inpatient treatment, three months of outpatient treatment, and seven months of aftercare. The goal of the study was to explore any client factors that may have been related to program outcome by looking at three separate groups of program clients: a) treatment completers who improved on program measures; b) treatment completers who did not improve; and c) program dropouts. Interestingly, there were several significant between-group differences on the various assessment tools employed within the program. More specifically, while the non-completers exhibited significantly higher social maladjustment, aggression, and school-related problems, program completers who improved in the program had significantly higher scores on repression and denial of emotions. Finally, program completers who did not improve evidenced significantly higher levels of depression and social anxiety.

Based on these findings, the authors asserted that there were two separate underlying motivations for adolescent substance abusers with externalizing disorders and internalizing disorders. More specifically, the externalizing group may be abusing substances to “self-stimulate”, which makes them much less likely to complete treatment. The internalizing group, on the other hand, engages in substance abusing behaviour to self-medicate (e.g., to alleviate their level of emotional unrest) and, as such, may be more likely to complete treatment.

The clear message from the above discussion is that in order for substance abuse treatment programs to be more effective, more attention must be paid to the psychopathology of adolescent substance abusers (Catalano et al., 1990; Dobkin et al., 1998; Kaminer et al., 1992). In particular, those with externalizing problems must be appropriately identified to ensure that their motivation for program participation is addressed (Catalano et al., 1990; Gilvarry, 2000). Several recommendations in this regard have been forwarded, such as ensuring the treatment plan is maximally personalized so that the youth can see how the program will meet their goals and also by helping the adolescent overcome social and personal deficits and/or problems which may be hampering their involvement in treatment (Catalano et al., 1990; Pickrel & Henggeler, 1996). Identifying and distinguishing substance abusers who exhibit different types of psychopathology at intake is also important as each of these populations will have unique treatment needs (Dobkin et al., 1998; Kaminer et al., 1992; Randall et al., 1999). For example, Randall et al. (1999) documented that substance abusers with externalizing disorders also have poorer familial environments, thus, engaging the parents and other family members in treatment may have a positive impact on the youth. In particular, emphasis could be placed on assisting the parents in more effectively structuring, monitoring and supervising the behaviour of the adolescent. For those with internalizing disorders (such as anxiety or depression), programs could be tailored so



that the youth are taught coping skills to help deal with these emotional difficulties (Randall et al., 1999). Although these preliminary suggestions admittedly need to be validated through additional empirical study, the value of these types of recommendations is clearly evident given the above reviewed findings on the negative impacts of psychopathology on program success.

3.1.6 Risk

Although this variable has not received any attention within the general adolescent substance abuse treatment literature, the risk principle of case classification has been lauded as an integral component in the delivery of effective correctional treatment for offenders (Andrews et al., 1990; Andrews & Bonta, 1998). The risk principle states that the amount of intervention an offender receives must be appropriately matched to his/her risk level to re-offend. More specifically, higher-risk offenders should receive more intensive and extensive services whereas lower-risk clients should receive minimal or no intervention.

Meta-analytic reviews of the young offender correctional treatment literature have provided strong empirical evidence for this principle as these reviews have demonstrated that programs that target high-risk cases exhibit more positive programmatic effects than those that target low-risk cases (Dowden & Andrews, 1999a; Lipsey, 1995; Lipsey & Wilson, 1998). The clinical utility of this principle has been also demonstrated in female (Dowden & Andrews, 1999b) and minority offenders (Andrews et al., 2001). Therefore, administrators of substance abuse interventions should ensure that appropriate risk assessments are conducted on program clients and that the high-risk cases are prioritized for treatment involvement and receive more intensive treatment exposure.

3.1.7 Additional client characteristics

In a review of the substance abuse treatment literature, Annis (1990) described several client characteristics that were related to positive treatment outcomes in substance abuse interventions. These factors included “being married, employed, of a high social class, financially secure, socially active and well adjusted to work and marriage, and having little history of arrest.” Unfortunately, these factors are not commonly found in correctional populations (Annis, 1990), and are even less likely to be found in young offenders. Those client factors most strongly related to negative program outcome, on the other hand, were quite prevalent in offenders including aggressiveness, high rates of attempted suicide, and various problematic psychiatric symptomatology (Annis, 1990).

3.2 In-treatment variables

Several researchers have highlighted the critical importance of exploring the “black box” of treatment. Process evaluations in which researchers examine program and policy delivery issues that accompany any intervention are the method of choice for achieving this goal (Cullen & Gendreau, 2000; Rossi, Freeman, & Lipsey, 1999; Sealock, Gottfredson, & Gallagher, 1997). By not attending to these process issues, it is virtually impossible to determine whether a treatment program is truly responsible for the observed results and, more importantly, how it actually works (Danegger, Cohen, Hayes, & Holden, 1999, cf. Mears & Kelly, 2002). Despite the beneficial contributions of these types of studies to the correctional treatment literature, this evaluative approach has essentially been ignored in the mainstream criminological literature (Mears, Kelly, & Durden, 2001; Prendergast, Podus, & Chang, 2000). This unfortunate situation

is compounded by the fact that most program evaluations examine programmatic impacts on only a short list of outcome variables, such as recidivism, which results in a very limited and arguably incomplete perspective of program success (Harachi, Abbott, Catalano, Haggerty, & Fleming, 1999).

Although outcome evaluations of programs are of paramount importance in ascertaining the effectiveness of a particular intervention, not knowing how the participant performed in the treatment (e.g., was there a decrease in a treatment-related outcome variable such as attitudes favourable to substance abuse), makes it difficult, if not impossible, to directly tie the effects of program participation to the outcome achieved. Linking changes in intermediate measures to program outcome data is the most comprehensive and reliable assessment of correctional program effectiveness (Andrews & Bonta, 1998). As summarized nicely by Prendergast et al. (2000), if programs possessing a certain combination of characteristics are responsible for significant differences in the observed therapeutic impact, then agencies responsible for delivering such programs can improve the effectiveness of their treatment services by focusing on these characteristics. Several variables fall within this broad category of program factors and include program setting, organizational characteristics, program length, program targets, relapse prevention, client-treatment matching, and style and mode of program delivery.

3.2.1 Program setting

In the broader correctional treatment literature, much has been made of the impact of the program delivery site on client outcome. More specifically, several researchers have argued that programs should ideally be delivered within community as opposed to residential settings (Andrews et al., 1990; Andrews & Bonta, 1998; Hill, Andrews, & Hoge, 1991). This has also been debated in the substance abuse treatment literature, although the terminology is somewhat different with outpatient and inpatient programs corresponding to community and residential programs respectively.

Several studies have explored the impact of inpatient versus outpatient substance treatment programs on client outcome. However, to date, the evidence supporting the differential effectiveness of one over the other is lacking (Annis, 1990; Catalano et al., 1990). More specifically, some evaluations have reported both settings yield equally positive results whereas others have found greater improvements within one at the exclusion of the other. Appropriately interpreting these findings is compounded by the fact that these studies have employed different outcome measures and follow-up periods (Catalano et al., 1990). Furthermore, and arguably more important, the applicability of these findings to substance-abusing young offenders is questionable given the fact that the aforementioned results were generated from the broader adolescent substance abuse treatment literature. Therefore, some of the findings from the broader correctional treatment literature will be reviewed here to supplement this discussion.

Previous meta-analyses of the correctional treatment literature have found significant impacts of program setting on program outcomes for young offenders. More specifically, programs delivered in community settings have achieved significantly higher mean reductions in recidivism than those conducted within an institutional setting (Dowden, 1998; Hill et al., 1991). A more recent meta-analytic review of the substance abuse treatment literature by Dowden, Bania and Andrews (in preparation) provides some additional preliminary evidence. These



authors reported that young offender substance abuse programs yielded a more positive client outcomes (as measured by reduced recidivism) when delivered in a community as opposed to residential setting.

3.2.2 Program length

Another intuitively appealing variable that may be reasonably assumed to be related to program effectiveness is program length. Although preliminary evidence from both correctional (Sealock et al., 1997) and non-correctional populations (Friedman et al., 1986; Hubbard et al., 1985; Latimer, Newcomb, Winters, & Stinchfield, 2000) suggests that length of treatment is positively related to program completion, its contribution to overall program effectiveness is minimal (Catalano et al., 1990). Despite this discrepancy, a recent study by Latimer et al. (2000) may help explain this state of affairs. More specifically, their results indicated that although length of treatment was positively associated with client outcome for inpatient and outpatient settings, this effect was only evident at six months following program termination. The authors suggested that previous contradictory findings and the limited magnitude of the effects may be explained because the studies did not sufficiently follow-up program graduates to capture the therapeutic impacts of the program. Clearly, replication of these findings in non-correctional and, more importantly for the present review, correctional samples of adolescents is key.

As mentioned, the findings for program length have only been examined explicitly in non-offender adolescent substance abusing populations. In the broader correctional treatment literature, Dowden (1998) reported that program length (measured in treatment hours) was associated with significantly improved client outcomes for young offenders. Thus, further explorations of the impact of program length on client outcome are warranted as the preliminary evidence suggests this is an important programmatic consideration.

3.2.3 Program targets

Several recent meta-analyses of the broader correctional treatment literature have made a concerted effort to focus more specifically on the programmatic targets of the intervention to observe their impact on client outcome. Although some studies have divided these factors into criminogenic as opposed to non-criminogenic needs (Dowden & Andrews, 1999a, 1999b, 2000; Dowden et al., in press), others have followed a more generic approach (Garrett, 1985; Lipsey, 1995; Lipsey & Wilson, 1998; Pearson & Lipton, 1999). Regardless of the perspective taken, each of these meta-analyses has demonstrated that the types of program targets, including but not limited to substance abuse, have significant effects on program outcome.

Wilson et al., (2001) recently explored the effectiveness of several types of school-based prevention programs on alcohol/drug use through a meta-analytic review of the extant literature. They divided the interventions into two broad categories, environmentally focused (e.g., classroom instructional management, establishing norms or expectations for behaviour) and individually-focused (e.g., self-control or social competency training). Overall, very few of the interventions were sufficiently explored to ensure reliable conclusion, but the most effective type of program was environmentally-focused, although the effect was small (roughly .10).

Although the above meta-analysis exclusively focused on school-based prevention programs, the overall conclusions are relevant to the young offender substance abuse treatment literature as

well. Wilson et al. (2001) concluded that it is highly unlikely that any single type of strategy implemented in isolation, will have a large impact on client alcohol or drug abuse, a position well-supported by their data. This suggests that a more meaningful way to explore the question of “what works” is to focus on which combinations or sequences of program types work best. Clearly, past research has essentially ignored issues surrounding the potential additive and multiplicative effects of combining different programs. The importance of the concurrent or sequential delivery of programming is even more evident when considering the co-occurrence of substance abuse with various other forms of problem behaviour. As a result, Wilson et al. (2001) urged researchers to explore the relative effectiveness of different sets and combinations of interventions so that a knowledge base can be developed which will aid in the selection of the most appropriate constellation of programs for a particular treatment population.

The above suggestion has also been forwarded by several other researchers (Annis, 1990; Farrell et al., 1992; Greenwood, 1992). As noted by these authors, since research has generally found that there is a constellation of factors operating concurrently (including substance abuse and delinquent behaviour), from an intervention perspective, this implores program deliverers to ensure that multiple problem areas (e.g., academics, family, antisocial peer group membership) are targeted or else the intervention will not be as effective.

One potential avenue of investigation for enhancing program effectiveness is involving the family in the treatment program. More specifically, Dobkin et al. (1998) found that treatment completion was far better in cases where the parents were actively involved in the program than when parents were not. Further confirmatory evidence for the importance of familial variables was found in a recent program evaluation of a substance abuse program offered to youthful offenders as program staff identified family issues as one of the key barriers to successful program completion (Mears et al., 2001). Finally, several researchers have lauded the utility of involving other family members in preventative efforts aimed at keeping adolescents from developing substance abuse problems (DeMarsh & Kumpfer, 1985; Kumpfer & Turner, 1990).

The importance of family treatment for young offenders has also been demonstrated in various meta-analyses of the correctional treatment literature (Dowden & Andrews, 1999a; Garrett, 1985; Latimer, 2001; Lipsey, 1995). However, Dowden and Andrews (1999a) noted that not necessarily all forms of family intervention are effective. More specifically, programs that focused on increasing family affection and monitoring/supervision practices yielded significant mean reductions in re-offending compared to control groups. More generic family intervention programs (e.g., those that did not discuss their family-oriented treatment targets), however, were associated with negative client outcomes. Thus program administrators should ensure that they are explicit regarding their program targets and address familial factors important for reducing criminal behaviour in adolescents.

3.2.4 Relapse prevention

Although it could be argued that relapse prevention should be considered a program target, given its popularity within the substance abuse treatment literature and the more recent expansion of this concept into a complete programmatic framework, it was decided to address this topic separately. The necessity of incorporating some form of relapse prevention into a substance abuse treatment program is illustrated in previous work where relapse rates have been reported as



high as 85% in both adult and adolescent substance abusers (Catalano et al., 1990). Thus, it is not surprising that the relapse prevention approach has been viewed as an integral component of delivering effective treatment (Annis, 1990; Catalano et al., 1990).

The relapse prevention model was originally developed to aid in the treatment of various addictive behaviours such as substance abuse, cigarette smoking and overeating (Marlatt & Gordon, 1985). Its primary goal was to buffer the positive behavioural changes achieved by participating in a particular treatment program through the enhancement of various self-management strategies (Bakker, Ward, Cryer, & Hudson, 1997). More specifically, it focused on teaching an individual how to identify particular high-risk situations, introduce coping styles as well as enhance feelings of self-efficacy in dealing with these situations (Bakker et al., 1997; Laws, 1999; Marlatt & Gordon, 1985).

The strong intuitive appeal of the relapse prevention model, coupled with its focus on treating various other addictive behaviours, has resulted in the model being applied to the treatment of substance-abusing (Peters, 1993) and sexual offenders (Laws, 1999; Pithers, Marques, Gibat, & Marlatt, 1983; Ward & Hudson, 1996). Other researchers have stressed that relapse prevention should also be applied within the treatment of general offender populations wherever possible (Cullen & Gendreau, 1989; Gendreau, 1996).

Despite the widespread coverage given to this approach within the mainstream literature, few controlled outcome studies have formally evaluated its effectiveness within both correctional (Laws, 1999) and non-correctional samples (Catalano et al., 1990; Stephens, Roffman, & Simpson, 1994). However, a recent meta-analysis of the correctional treatment literature by Dowden et al. (in press) consolidated the findings of correctional interventions that targeted relapse prevention as one of their program targets. The authors found relapse prevention programs as a whole to be effective, resulting in an average 15% decrease in recidivism for treatment versus comparison group subjects. More importantly for the present review, it was found that using relapse prevention with youthful offenders yielded significantly stronger programmatic effects in terms of recidivism reduction than when it was used with adult offenders. Thus, the critical importance of incorporating elements of relapse prevention in a treatment protocol for young offenders seems evident based on the above-reviewed findings.

3.2.5 Client-treatment matching

Several researchers have noted that one of the most critical aspects of effective programming involves appropriate client identification, assessment and referral (Farabee et al., 1999; Hiller et al., 1999a). A technique adopted in the substance abuse treatment field to deal with this concern has been labelled client-treatment matching, otherwise known as the matching hypothesis (Annis, 1990). The fundamental principle underlying this approach is that a client with a certain set of factors may respond more favourably to a particular kind of treatment program or setting than another, and that due diligence must be exercised to ensure appropriate matching of client to treatment is achieved to maximize the therapeutic benefits of program participation. Despite the relative recency of the concept, Annis (1990) found empirical support for this hypothesis in her review of the substance abuse treatment literature as she reported 15 studies had documented positive programmatic effects as a result of this practice.

Client-treatment matching has also received support in the broader correctional literature. More specifically, the recent meta-analytic review conducted by Dowden (1998) reported that programs that assessed the needs of the offender at intake and subsequently assigned him/her to an appropriate treatment program based on this assessment, yielded significantly higher mean reductions in re-offending compared to programs that did not employ this practice. This trend has also been found in correctional program evaluations that involved juvenile (Dowden & Andrews, 1999a) and female offenders (Dowden & Andrews, 1999b).

Overall, these studies provide convincing empirical evidence for the clinical utility of this approach when delivering correctional treatment to substance abusing young offenders. This practice has a great deal of intuitive appeal, as one would expect that individuals assigned to programs that target an identified “personal” need area would be much more likely to obtain more positive effects from program participation.

3.2.6 Style and mode of program delivery

Considerable research attention has focused on the style and mode of program delivery, with particular emphasis being placed on determining whether cognitive-behavioural/behavioural (such as modeling, graduated practice, rehearsal, and role playing), or non-behavioural methods which follow a more didactic approach, are equally effective when delivering substance abuse treatment to adolescent populations. The vast majority of the evidence to date suggests that cognitive-behavioural/behavioural methods are far superior and this fact has been demonstrated within school-based substance abuse programs (Wilson et al., 2001), broad correctional samples (Dowden, 1998; Dowden & Andrews, 1999b; Losel, 1995), young offenders (Dowden, 1999a; Lipsey, 1995) and substance abusing offenders (Pearson & Lipton, 1999). Clearly, this plethora of research evidence supports a behavioural or cognitive-behavioural framework for delivering substance abuse treatment to youthful offenders.

3.2.7 Organizational variables

Recently, correctional investigators have begun to explore the role of organizational-level variables (e.g., staff turnover, staff training, organizational support for rehabilitative ideal) in the delivery of effective correctional treatment. This shift in focus has been motivated by the fact that substantial variations in program effectiveness have been documented within programs, even those following the same treatment modality (Prendergast et al., 2000). Although very little research to date has focused on these issues, the preliminary empirical evidence suggests that organizational factors may be the most important determinants for successful programs due to their strong influence on program implementation and delivery (Cullen & Gendreau, 2000; Farabee, Prendergast, Cartier, Wexler, Knight, & Anglin, 1999; McBride, VanderWaal, Terry, & VanBuren, H., 1999; Mears et al., 2001).

One such organizational variable that may impact the therapeutic potential of the program is staff turnover (Farabee et al., 1999; Mears & Kelly, 2002). Several intuitively appealing explanations for the link between increased staff turnover and poorer program performance have been forwarded by Mears and Kelly (2002). First, the youths may be attached to those officers who leave their positions and subsequently the youths feel abandoned and may not put as much effort into the program. Furthermore, hiring new staff who require extensive training may impinge on the effectiveness of the program as these new employees will not be as effective with program



clients. Finally, as has been noted by several other correctional investigators, the difficulty in maintaining and nurturing a therapeutic milieu for program clients with constant turnover of staff is a colossal task as replacement staff members have limited knowledge of the program and its participants (Farabee et al., 1999; Harachi et al., 1999).

Another organizational variable that has received preliminary support in the extant literature is the age of the program. For example, Mears and Kelly (2002) found that newer programs evidenced stronger programmatic effects, presumably because of the enthusiasm and sustainable human and fiscal resources surrounding the venture. This finding has also been found in the broader correctional treatment literature (Dowden, 1998). Thus, attention should be given to ensure more seasoned programs maintain both their enthusiasm and funding so they continue to have a positive impact for program clients in the later stages of their existence.

Although preliminary, several individual studies have found additional setting or organizational variables related to client outcome in substance abuse treatment programs. McCaughrin and Price (1992) reported that clients performed significantly better in programs that had a larger number of treatment staff, were “for-profit”, made sobriety a condition of treatment involvement, provided post-treatment referrals, and conducted post-treatment follow-up assessments of clients. Magura and colleagues (1999), in a large-scale review of methadone maintenance programs, found that the experience of the clinic director and his/her direct involvement in delivering treatment services to the clients, as well as number of counselling contacts, were positively related to program outcome. A recent meta-analytic review of drug dependence treatment programs (Prendergast et al., 2000) found that within a given modality, enhanced client outcomes (as measured by decreased drug use and criminal activity) were observed in programs “that closely monitor the integrity of the treatment protocol, that have a lower ratio of counsellors to clients, that have higher retention rates, and that offer more hours of contact time” (p.1958). Finally, Farabee et al. (1999) noted that recruitment and training of treatment staff, leadership, capacity, and more generally, support for rehabilitation were important organizational level variables that could affect program outcome. Mears and Kelly (2002) also found confirmatory evidence for the latter point within a substance abuse program for young offenders.

A recent meta-analysis of the correctional treatment literature provides strong empirical evidence for the clinical utility of a cluster of organizational-level variables termed program integrity (Andrews & Dowden, under review). Program integrity refers to a program that is conducted in practice as intended in theory and design (Hollin, 1995). In the Andrews and Dowden (under review) meta-analysis, programs were evaluated on their adherence to program integrity based on whether the program followed a specific model, whether the staff were appropriately selected, trained and appropriately supervised, whether printed materials (e.g., program goals and content) were available, and whether monitoring of changes on intermediate outcome measures was conducted. The results indicated that each of these aspects of program integrity were associated with enhanced program effectiveness. More importantly, all of these indicators, with the exception of monitoring in-program changes, were linked with significant programmatic improvements in terms of client outcome (e.g., programs that incorporated these elements of program integrity yielded significantly higher mean reductions in re-offending than programs that did not use these elements).

3.3 Post-treatment factors

3.3.1 Aftercare

Aftercare is defined as providing therapeutic activities and support to the substance abusing client following program completion, to help ensure the gains he/she made during treatment generalize to the community (Correctional Services Canada, 1996; Lurigio, 2000; Sealock et al., 1997). This transference of treatment gains is necessary because one of the major criticisms lodged against substance abuse treatment is that, given the complexity of the problem, it is naïve to expect that changes observed within a residential setting will transfer successfully to the community (Stein, Garrett, & Christiansen, 1990).

One of the reasons why aftercare has been viewed as a critical success factor in the delivery of effective substance abuse treatment programs is the fact that past research has demonstrated that roughly 50% of the variation in post-release failure in adult populations can be attributed to post-treatment factors (e.g., family support) (Moos, Finney, & Cronkite, 1990). Unfortunately, comparable data is not currently available in the adolescent substance abuse treatment literature and highlights a significant knowledge gap (Latimer et al., 2000).

Despite the intuitive appeal of this form of programming, very few studies involving correctional populations have examined aftercare impacts (Sealock et al., 1997). Two recent meta-analyses of the correctional treatment literature have provided preliminary evidence in this regard and have shown that programs that incorporate elements of aftercare sessions into their program model yield moderate programmatic improvements in the treatment group (Dowden et al., in press; Dowden et al., in preparation).

3.3.2 Protective factors

Past research has demonstrated that there is considerable individual variability in terms of how adolescents respond to the same risk factors. Accordingly, experts in the field have attempted to identify protective or strength factors, which contribute to the resilience of these juveniles from risky situations and mark a relatively new line of scientific inquiry within the field of adolescent substance abuse treatment.

Protective factors are separate from risk factors and should not be viewed as the absence of risk factors (Gilvarry, 2000). In addition, assuming that protective and risk factors operate at opposite ends of the same continuum is incorrect as this claim has yet to be verified (Newcomb & Felix-Ortiz, 1992; Rutter, 1991). More precisely, these factors may moderate the risk of substance misuse, or in the ideal scenario, make the youth more resilient when faced with potentially harmful situations (Newcomb, & Bentler, 1988; Newcomb & Felix-Ortiz, 1992;).

Gilvarry (2000) listed several of the pre-eminent protective factors in the adolescent substance abuse literature: positive temperament; family environment supportive to the youth; functional, caring relationship with at least one adult; and an external support system that values and rewards pro-social values. Fergusson, et al. (1996) also found a series of protective factors including high intelligence, non-engagement in novelty-seeking behaviour, as well as the absence of friendships with antisocial peers.

Unfortunately, none of the studies examined in the present review explored protective factors



and their role in providing effective treatment to a young offender population. The impact of protective factors for both the prediction and treatment of criminal behaviour which is tied to substance abuse has several obvious implications. For example, treatment programs could be built around these strength factors to enhance pre-existing positive conditions in the lives of the young offender. This approach has been adopted quite successfully in the family intervention literature with Functional Family Therapy (Alexander & Parsons, 1973; Alexander, Pugh, Parsons, & Sexton, 2000; Alexander, Sexton, & Robbins, 2000), an approach that has received strong empirical support regarding its therapeutic potential with young offender populations (Alexander & Parsons, 1973; Klein, Alexander, & Parsons, 1977; Barton, Alexander, Waldron, Turner, & Warburton, 1985; Gordon, Graves, & Arbuthnot, 1995). Therefore, considerable resources should be garnered in the future to explore this topic area in substance abuse treatment for young offenders.

3.4 Additional considerations

3.4.1 Dropout rates

A major problem that has plagued the field of substance abuse treatment is the high dropout rates (Henggeler, Pickrel, Brondino, & Crouch, 1996; Hiller et al., 1999a), a concern that has been noted in the non-offender treatment literature as well (Dobkin et al., 1998). This problem is a major consideration for program administrators since individuals who drop out of treatment are essentially wasting valuable and scarce program resources as the costs expended during intake and initial treatment are not recovered through reducing problematic client behaviours such as recidivism and/or substance use/abuse (Hiller et al., 1999a). Several variables associated with program attrition were identified in a recent study by Hiller et al. (1999a) in a sample of adult probationers. These factors were unemployment and high levels of depression, anxiety, and hostility. As discussed previously, psychopathology is also a key client variable related to program attrition.

Despite these well-documented difficulties in retaining program clients in substance abuse treatment, Henggeler et al. (1996) reported that multisystemic therapy (MST) may be a very promising intervention to avoid this crucial breakdown in service delivery. More specifically, the results of their study found that when exploring the services received by a sample of over 100 adolescents randomly referred to either traditional community services or MST, 98% of those in the MST condition received and completed a full course of appropriate treatment, compared to only 22% for those receiving alternate services.

The authors noted that the hallmark of success achieved by the MST approach in terms of significantly reducing program attrition may result from its reliance on strategies lauded by other experts as being critical to maximizing client retention in treatment (Stark, 1992; Szapocznik, Perez-Vida, Brickman, Foote, Santisteban, Hervis, & Kurtines, 1988). As summarized by Henggeler and his colleagues (1996), the key strengths of MST in this regard are:

- program therapists are always available;
- program team is fully responsible for treatment involvement of clients and subsequent achievement of program goals;
- the treatment program is developed from a strength-perspective with goals determined

- almost exclusively by the family members; and,
- program services are specifically tailored to meet the many dynamic needs of the clients.

Despite these promising findings for the effectiveness of MST programs in reducing client attrition, more work needs to be done in this area. For example, primary research within young offender populations should focus on what types of clients drop out from programs and their reasons for doing so. In addition, it may be useful to apply some of the program strengths identified by Henggeler and his colleagues to other forms of substance abuse or correctional programs offered to substance abusers to determine whether they have an equally positive impact in terms of preventing program drop-outs.

Given the importance of program attrition to the field of substance abuse treatment, researchers should devote considerable energy to uncovering those factors that are predictive of this critical negative treatment outcome. Some intuitively appealing variables that may be expected to be reasonably linked with client attrition, but require further empirical validation, include the satisfaction of the client with the program (Hiller, Knight, & Simpson, 1999b), client expectations of the treatment process (McCorkel, Harrison, & Inciardi, 1998) and the quality of the relationship between the counsellor and the client (Broome, Knight, Hiller, & Simpson, 1996; Broome, Knight, Knight, Hiller, & Simpson, 1997).

3.4.2 Involved evaluator

Previous research exploring the effectiveness of interventions for both offender (Dowden, 1998; Dowden & Andrews, 1999b; Latimer, 2001) and non-offender populations (Prendergast et al., 2000) has found that the involvement of the evaluator in the development and delivery of the treatment program has a significant effect on the results reported. More specifically, programs evaluated by an individual who was either directly or indirectly involved in some aspect of the program report stronger programmatic effects than those that did not.

Two alternate explanations have been proposed to explain this finding. The first is that evaluators who are involved in service delivery are much more likely to follow treatment protocols, to ensure staff are specifically trained, and closely monitor program structure and content to ensure it is delivered as intended. Put more succinctly, an involved evaluator will concentrate on program integrity issues (Dowden & Andrews, 1999a; Lipsey, 1995; Prendergast et al., 2000). An alternate hypothesis is that an involved evaluator is biased as they are “looking” for positive programmatic outcomes and so are more likely to present a more favourable impression of the results (Lipsey, 1995; Prendergast et al., 2000). Unfortunately, the literature to date has not provided a clear-cut answer to this question and designing a valid empirical test of this issue would be quite difficult.

3.4.3 HIV/AIDS

As mentioned previously, substance abuse by adolescents tends to lead to many negative problem behaviours and outcomes, not necessarily limited to delinquency. An especially salient concern with this population is HIV/AIDS as the available data suggests a definite association between substance use and risk of sexually transmitted disease (Gilvarry, 2000). This relationship has also been documented in the criminal justice literature as well – research has



consistently found that offenders are much more likely to test positive for HIV/AIDS than the general population (Collica, 2002; Hammett, Harmon, & Maruschak, 1999). This problem is even more intensified for female offenders as their rates of HIV within the criminal justice system exceed those of men, the only population in which females are more disproportionately affected (Anderson, Rosay, & Suam, 2002). The extremely high level of HIV/AIDS cases in correctional settings and the risks these individuals pose to each other, as well as the community at large, has prompted researchers to strenuously argue for the comprehensive targeting of this issue through intensive programming in prison (Hammett et al., 1999; Keeton & Swanson, 1998).

The issue of HIV/AIDS transmission for substance abusing offenders is critical when one considers the risky behaviours they engage in both inside and outside a correctional setting. For example, past research has found that inmates are more likely to test positive for HIV infection if they have been charged with a drug offence (Cotton-Oldenburg, Martin, Jordan, Sadowski, & Kupper, 1997; Hammett et al., 1999) or if they were injection drug users (Harrison, Butzkin, Inciardi, & Martin, 1998). The importance of addressing this need in youthful offenders is emphasized even further when one considers adolescent drug users report higher HIV risk behaviours compared to their adult counterparts (Battjes, Leukefield, & Pickens, 1992; Nelson, Vlahov, Solomo, Cohn, & Munoz, 1995). More alarmingly, there is evidence that some marginalized groups, such as street youth, may be particularly prone to engage in elevated levels of risky behaviour in this regard.

Given the strong relationship between substance abuse and criminal behaviour noted in previous research and the negative living conditions surrounding these youth, concerns about HIV/AIDS transmission should be viewed as even more critical. One potentially valuable intervention strategy in this area is peer-based HIV/AIDS treatment programs as they offer many advantages to both the offender as well as the correctional institution. For example, the high level of trust between offenders and their generally shared backgrounds may motivate program clients to attend more closely to program content. Furthermore peer counsellors are more available to the offenders given their constant presence in the unit. Peer-led groups would also have the advantage that the facilitator would be much more aware of the HIV/AIDS risk behaviours that are currently occurring within that institution and could use this knowledge to enhance the relevance of the program to the clients. Finally, from a more pragmatic perspective, these types of programs would be quite cost-effective (Hammett et al., 1999).

3.4.4 Alcoholics Anonymous

Alcoholics Anonymous (AA) views alcoholism as an incurable disease that must be coped with by the individual (McNeece et al., 2001). Based on this perspective, AA promotes an abstinence-based model for treating substance abuse. Other 12-step programs, such as Narcotics Anonymous, have been derived from AA, and essentially follow the same conceptual framework.

Despite their popularity, there is a dearth of research exploring their effectiveness (McNeece et al., 2001). One of the few evaluation studies that examined this approach (Alford, Koehler, & Leonard, 1991) reported the program only benefited adolescents who grasped and accepted the principles of AA, but a couple of caveats should be noted regarding this finding. First, a strong

methodological limitation of this study was that a comparison group was not used so there was no way to track how another similar group of untreated offenders would fare on these outcomes. Furthermore, this study was conducted on a sample of non-criminal adolescents and therefore the findings may not generalize to an offender population.

Very preliminary data regarding the effectiveness of 12-step self-help programs to young offender populations was reported in the meta-analysis of Dowden et al. (in preparation). More specifically, the findings indicated that programs that incorporated self-help elements into their overall programmatic strategy yielded an increase in recidivism in the treatment as opposed to comparison group. However, the small number of effect sizes contributing to this result suggests that it should be interpreted with caution.

The above results suggest that much more work needs to be done in exploring the effectiveness of self-help programs for both offender and non-offender groups of substance-abusing adolescents. However, it should be noted that the preliminary evidence is not very promising. At the very least, if program administrators want to offer these types of services to young offenders, they must ensure that other forms of intervention are incorporated into the overall treatment plan.



4.0 Defining Treatment Success

Reviewing the adolescent substance abuse treatment literature in both offender and non-offender samples highlights the fact that there is very little agreement on defining programmatic success (McNeece et al., 2001). This situation is compounded by the fact that substance abuse affects many different physical, mental, and behavioural outcomes and so obtaining universal agreement on which set of outcomes define program success is quite difficult. An additional obstacle standing in the way of solid scientific process is that even if a universal set of indicators for program success were unanimously selected, there exists considerable disagreement on how these outcomes should be measured (Catalano et al., 1990).

Despite these concerns, some researchers have provided promising recommendations to build on for the future. More specifically, Webster-Stratton and Taylor (1998) proposed four standards that should be met in order to classify an intervention as appropriately empirically supported.

- *a detailed scientific report on the outcomes is available* - they considered publication of the article in a peer-reviewed journal as sufficiently meeting this standard;
- *short- and long-term effects demonstrated in a randomized controlled trial compared to no treatment or an alternate treatment approach* – the authors proposed that this type of experimental design, where subjects are randomly assigned to either a treatment or comparison condition, is essential in order to answer whether the intervention is truly effective;
- *effects demonstrated on a primary predictor of adolescent substance abuse, violence, and delinquency* – as persuasively argued by the authors, unless the evaluators assess the impact of the program on one of the primary predictors of these negative outcomes, it is impossible to know whether the intervention will be effective and whether program participation brought about the changes in this area; and,
- *a manual is available describing the intervention* – this type of information is deemed critical in order to facilitate replication by other interested researchers or program administrators.

Recent evidence supplied by Dunford (2000) emphasizes the importance of appropriate adherence to the second standard mentioned above. He demonstrated in a program evaluation of a domestic violence program for spousal abusers that significantly different conclusions were reached depending on whether the comparison group data were considered in the analyses of program effectiveness. More specifically, when the comparison group data were excluded, the results indicated that the program was a success (as measured by pre-post improvements). However, when the comparison group data were considered in the analyses, it was found that the results did not provide a treatment effect (e.g., the treatment group performed equally well to the comparison group). This example clearly illustrates the pitfalls that occur when classical experimental design methodology is not incorporated into a program evaluation.

The Treatment Outcome Working Group sponsored by the Office of National Drug Control Policy (ONDCP) in the United States has also tackled the issue of defining effective substance abuse treatment. This working group consisted of a panel of treatment and evaluation experts and the cumulative results of their efforts was the establishment of standards and protocols for

defining substance abuse program effectiveness, which encompassed a wide range of physical, mental, and behavioural variables. These included:

- reduction in primary drug use;
- improved employment and educational situation;
- improved interpersonal relationships;
- improved medical status and general improvements in health;
- improved legal status;
- improved mental health status; and,
- improved non-criminal public safety (ONDCP, 1996, cf. McNeece et al. 2001).

Evaluating substance abuse treatment across a global constellation of factors has also been heralded by correctional investigators dealing with young offenders. More specifically, some researchers have argued due to the multiple influences that substance abuse has on an individual, the effectiveness of the program must be reviewed across each of these separate outcome measures rather than on a single outcome such as recidivism (Mears et al., 2001).

Based on these recommendations, it is clear that program evaluators should explore the impacts of the program on multiple outcome measures and not limit these indices to reductions in re-offending and/or substance abuse. Furthermore, and arguably most important, as discussed by Andrews and Bonta (1998), program evaluators must ensure that changes observed on intermediate outcome measures (e.g., dynamic factors) targeted during treatment are linked to the outcome variables of interest to ensure the program is responsible for any observed post-treatment effects.



5.0 Directions for Future Research

This paper has drawn together disparate lines of evidence examining the relationship between substance use and dependency and criminal activity as well as the variables that may affect the delivery of successful substance abuse treatment to young offenders. Although much additional research is required across each of these areas, several key points of emphasis are presented here to conclude the discussion.

As noted previously, more research needs to be done on exploring the specific relationships between the type of substance abuse and the corresponding type of criminal behaviour. More specifically, several researchers have documented that certain types of substance abuse have strong influences on certain types of criminal activity but not others (Dawkins, 1997; Farrell et al., 1992). Therefore, when designing a treatment protocol for individual offenders, knowledge of the type and magnitude of these specific relationships is imperative for ensuring maximal therapeutic impact.

Issues surrounding race and gender require more attention. This important clinical issue is further compounded when one considers the fact that gender and cultural sensitivity in treatment design and delivery has been essentially ignored in the research literature (Bloom, 1999; Covington, 1998; Rhodes & Jason, 1990) and that this type of focus may be critical for enhancing client retention. Although race and gender have not appeared to impact the relationship between substance abuse and criminal activity, ensuring that programs are race- and gender-sensitive are critical elements in the delivery of effective substance abuse programming (McNeece et al., 2001).

Significantly more resources must be committed to exploring substance abuse within Aboriginal adolescent populations. Although very few articles have examined criminological issues for Aboriginal populations in general (Bonta, LaPrairie, & Wallace-Capretta, 1997), research is essentially absent on Aboriginal youth justice issues. For example, none of the articles reviewed for the present paper dealt specifically with Aboriginal offender populations. Given the expanding Aboriginal population in the Canadian criminal justice system, this area is even more need of immediate study.

Future research should also strive to identify important protective factors for young offender with substance abuse problems given the multiple problematic behaviours which accompany this activity. One such factor is social support. There is limited empirical evidence for its buffering effects from environmental stressors (Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000), and the application of these findings to the adolescent offender literature is suspect for two main reasons. First, these previous studies were conducted on non-offender samples, thus their generalizability to delinquents is questionable. Furthermore, and arguably more important, given the strong relationships between negative peer and family environments and substance abusing and delinquent activity, it is reasonable to assume that the dynamics of this interaction may be different for young offenders.

An additional area for future exploration may be the personal motivations behind substance abusing behaviour in adolescents as this may provide a more direct understanding of why certain

individuals are drawn to certain types of deviant activity (White, 1991). For example, offenders who are motivated to engage in substance abusing behaviour to self-medicate require a much different intervention protocol than those who use substances to self-stimulate. Thus, understanding and appreciating the mechanisms underlying these differences in motivation will enhance the therapeutic effectiveness of substance abuse program for young offenders. Much more work needs to be done on school-based prevention efforts for reducing alcohol and/or drug use as the number of studies captured by the Wilson et al. (2001) study was quite small. This type of investigation is even more critical when one considers the plethora of evidence arguing for the early targeting and intervention for these types of problems (Webster-Stratton & Taylor, 1998).

As noted by several correctional researchers, although some suggestions have been forwarded to deal with the problems related to client attrition from substance abuse treatment programs (see Randall et al., 1999), future research must explore various mechanisms to address this important treatment need (Henggeler et al., 1996; Hiller et al., 1999a; Sealock et al., 1997). One particular avenue for achieving this goal would be to collect qualitative information, using a focus group format, whereby youthful offenders have the opportunity to explain what factors negatively affected their motivation for engaging in the program.



6.0 Conclusion

Clearly, as noted throughout this document, although much research has been conducted on substance abuse and crime in general, much less has been aimed at exploring effective treatment strategies with young offenders. Despite these concerns, the available literature certainly suggests that some programs are effective when delivered under certain conditions (Anglin & Hser, 1990; Hiller et al., 1999a; Lurigio, 2000; Sealock et al., 1997). However, it is evident that practitioners can incorporate several strategies into their program delivery protocol that will enhance the therapeutic potential of the intervention. To end this report, a summary checklist of issues that should be considered by program administrators when developing adolescent substance abuse treatment programs is provided based on the most robust findings reviewed in the literature to date.

6.1 Checklist for delivering effective substance abuse treatment to young offenders

6.1.1 Client characteristics

- ensure high-risk individuals receive the most intensive treatment services;
- ensure program content and delivery style take into consideration the demographics of the treatment group including age, race/ethnicity, and gender;
- assess the potential psychopathology of program clients and address this before, or at the very least, during treatment;
- assess client motivation and develop strategies to minimize the probability of program attrition through linking clear and observable rewards and punishments to program participation; and,
- identify and target substance abuse problems for intervention as early as possible.

6.1.2 Program development

- target multiple need areas within the treatment strategy including family relationship (e.g., affection, communication) and structural (e.g., monitoring and supervision practices of the parents) variables, academic and vocational performance, and antisocial peer group involvement;
- deliver programs as much as possible within community settings to ensure maximum skill transfer – if residential treatment is the only available option, ensure that aftercare and advocacy/brokerage services are used to buffer the effects of treatment;
- deliver programs in financially supported correctional settings with low staff turnover and an atmosphere supportive of rehabilitation;
- identify and target protective or strength factors;
- provide program services for an extended period to ensure penetration of program content;
- incorporate elements of relapse prevention into the treatment protocol;
- match clients to appropriate programs; and,
- ensure a systematic and targeted treatment protocol is also developed to address concerns surrounding HIV/AIDS.

6.1.3 Program Integrity

- ensure the program is based on a specific, theoretical model;
- train workers in program delivery and provide trained supervision;
- develop printed program materials describing program goals and content;
- monitor staff performance; and,
- select staff on key interpersonal or skill factors.

6.1.4 Program evaluation

- use a classical experimental design with random assignment to conditions (e.g., treatment versus comparison groups) to evaluate the program on a regular basis;
- assess program effectiveness across several target areas including reductions in delinquency, primary drug use, and familial, academic, and peer-related problems; and,
- conduct process evaluations more frequently in order to capture the how and what of program delivery.



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